19.07.2018	Kit components	
Product code	Description	
N9331012	Method 505 kit	
Components:		
N9331000	Reformulated Organohalide Pesticides Mix for Method 505	
N9331001	Toxaphene	
N9331002	Chlordane	
N9331003	STD Aroclor 1016	
N9331004	STD Aroclor 1221	
N9331005	Aroclor 1232	
N9331006	Aroclor 1242	
N9331007	Aroclor 1248	
N9331008	Aroclor 1254	
N9331009	Aroclor 1260	
N9331010	Aroclor 1262	
N9331011	Aroclor 1268	



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

Identification	
Product identifier	
Trade name: Reformulated Organohalide Pesticides Mix for Method 505Article number: N9331000Relevant identified uses of the substance or mixture and uses advised againstNo further relevant information available.Application of the substance / the mixture Laboratory chemicals	
Details of the supplier of the safety data sheet Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (within US) + 1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
Hazard(s) Identification	
Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
\checkmark	
<i>Eye Irrit. 2A H319 Causes serious eye irritation.</i> <i>STOT SE 3 H336 May cause drowsiness or dizziness.</i>	
51 51 51 5 11550 May cause arowsiness of all 21 mess.	(Contd. on pag



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

		(Contd. of page 1)
· Label elements		
· GHS label elemen	nts	
The substance is c	lassified and labelled according to the Globally Harmonised System (GHS).	
• Hazard pictogram	as GHS02, GHS07	
· Signal word Dang	per -	
· Hazard statement	S	
H225 Highly flam	mable liquid and vapour.	
H319 Causes serie	pus eye irritation.	
H336 May cause a	drowsiness or dizziness.	
· Precautionary sta	tements	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
P241	Use explosion-proof electrical/ventilating/lighting equipment.	
P303+P361+P35	3 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clo with water/shower.	thing. Rinse skin
P305+P351+P33	8 IF IN EYES: Rinse cautiously with water for several minutes. Remove c present and easy to do. Continue rinsing.	contact lenses, if
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	
P501	Dispose of contents/container in accordance with local/regional/nation regulations.	al/international
• Other hazards		

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

• Results of PBT and vPvB assessment

• **PBT:** Not applicable.

· vPvB: Not applicable.

3 Composition and Information on Ingredients

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

67-64-1	acetone		99.7365%
1912-24-9	atrazine (ISO)	STOT RE 2, H373 Skin Sens. 1, H317	0.125%
122-34-9	simazine (ISO)	🤣 Carc. 2, H351	0.125%
Additional	Components		
15972-60-8	alachlor (ISO)	Carc. 2, H351 Acute Tox. 4, H302; Skin Sens. 1, H317	0.005%
72-43-5	methoxychlor		0.0025%
5103-73-1	cis-Nonachlor		0.0005%
	dialdaria (ICO)		0.0005%
60-57-1	dieldrin (ISO)	Carc. 2, H351; STOT RE 1, H372	



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

5102 74 2	a mun a Chlandana		ontd. of page 2
	gamma-Chlordane		0.0005%
58-89-9	<i>γ</i> -HCH or <i>γ</i> -BHC	 Acute Tox. 3, H301 STOT RE 2, H373 Acute Tox. 4, H312; Acute Tox. 4, H332 	0.0005%
76-44-8	heptachlor (ISO)	Acute Tox. 3, H301; Acute Tox. 3, H311 Carc. 2, H351; STOT RE 2, H373	0.0005%
1024-57-3	heptachlor epoxide	Acute Tox. 3, H301 Carc. 2, H351; STOT RE 2, H373	0.0005%
118-74-1	hexachlorobenzene	🚸 Carc. 1B, H350; STOT RE 1, H372	0.0005%
77-47-4	hexachlorocyclopentadiene	Acute Tox. 3, H311; Acute Tox. 2, H330 Skin Corr. 1B, H314 Acute Tox. 4, H302	0.0005%
5103-71-9	alpha-Chlordane		0.0005%
309-00-2	aldrin (ISO)	Acute Tox. 3, H301; Acute Tox. 3, H311 Carc. 2, H351; STOT RE 1, H372	0.0005%
39765-80-5	trans-Nonachlor		0.0005%

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- · Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available. • Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire Fighting Measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
- Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

(Contd. on page 4)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

(Contd. of page 3)

Prevent seepage into sewage system, workpits and cellars. Dilute with plenty of water.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Store in cool, dry place in tightly closed receptacles.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· Conditions for safe storage, including any incompatibilities

• Storage:

- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions:

Store receptacle in a well ventilated area.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

• Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

67-64-1 acetone

WES Short-term value: 2375 mg/m³, 1000 ppm

Long-term value: 1185 mg/m³, 500 ppm

• Additional information: The lists valid during the making were used as basis.

• Exposure controls

· Personal protective equipment:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin.

• **Respiratory protection:** Not required.

(Contd. on page 5)

[–] AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

(Contd. of page 4)

• Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles

9	Physical	and	Chemical	Properties
	,			r

Information on basic physical and c General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	94.7 °C
Initial boiling point and boiling ra	inge: 55 °C
Flash point:	$< \theta \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	465 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapou mixtures are possible.
Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
Vapour pressure at 20 °C:	233 hPa
Density at 20 °C:	1.41 g/cm ³
Relative density	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

		(Contd. of page 5)
· Vapour density	Not determined.	
Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
water:	Fully miscible.	
· Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	<i>99.7 %</i>	
Solids content:	0.3 %	
• Other information	No further relevant information available.	

10 Stability and Reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

· Information on toxicological effects

• Acute toxicity

· LD/LC50 values relevant for classification:

67-64-1 acetone

Oral LD50 5,800 mg/kg (rat)

Dermal LD50 20,000 mg/kg (rabbit)

15972-60-8 alachlor (ISO)

Oral LD50 1,200 mg/kg (rat)

- · Primary irritant effect:
- Skin corrosion/irritation No irritant effect.
- Serious eye damage/irritation Irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- \cdot Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

(Contd. on page 7)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

(Contd. of page 6)

To	oxicity
Aq	<i>uatic toxicity:</i> No further relevant information available.
	rsistence and degradability No further relevant information available.
	haviour in environmental systems:
Bi	oaccumulative potential No further relevant information available.
	obility in soil No further relevant information available.
	lditional ecological information:
	eneral notes:
Da	o not allow product to reach ground water, water course or sewage system.
	unger to drinking water if even small quantities leak into the ground.
	esults of PBT and vPvB assessment
	3T: Not applicable.
	vB: Not applicable.
Ot	her adverse effects No further relevant information available.
D	isposal considerations
	aste treatment methods
	ccommendation ust not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Recommendation:** Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

UN-Number	
· ADG, IMDG, IATA	UN1993
· UN proper shipping name	
ADG	1993 FLAMMABLE LIQUID, N.O.S., special provisio
	640D (ACETONE)
· IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (ACETONE)
· Transport hazard class(es)	
ADG	
· Class	3 (F1) Flammable liquids.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505 (Contd. of page 7) · Label 3 · IMDG, IATA 3 Flammable liquids. · Class · Label 3 · Packing group · ADG, IMDG, IATA Π • Environmental hazards: · Marine pollutant: No Warning: Flammable liquids. · Special precautions for user · Danger code (Kemler): 33 · EMS Number: *F*-*E*,*S*-*E* · Stowage Category В • Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable. • Transport/Additional information: ·ADG · Limited quantities (LQ) lL \cdot Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml · Transport category 2 • Tunnel restriction code D/E· IMDG · Limited quantities (LQ)lL \cdot Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml • UN "Model Regulation": UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640D (ACETONE), 3, II

Safety, hea	lth and environmental regulati	ons/legislation specific for the substance or mixture	
67-64-1	acetone	🔅 Flam. Liq. 2, H225 Eye Irrit. 2A, H319; STOT SE 3, H336	99.7365%
1912-24-9	atrazine (ISO)	STOT RE 2, H373 Skin Sens. 1, H317	0.125%
122-34-9	simazine (ISO)	& Carc. 2, H351	0.125%



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

(Contd. of page 8)

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category P5c FLAMMABLE LIQUIDS
- \cdot Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour. H300 Fatal if swallowed. H301 Toxic if swallowed. H302 Harmful if swallowed. H310 Fatal in contact with skin. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H330 Fatal if inhaled. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H350 May cause cancer. H351 Suspected of causing cancer. H372 Causes damage to organs through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. • Department issuing SDS: Environmental, Health and Safety · Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

• Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

(Contd. on page 10)

[·] National regulations:

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Reformulated Organohalide Pesticides Mix for Method 505

(Contd. of page 9)

ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A Skin Sens. 1: Skin sensitisation – Category 1 Carc. 2: Carcinogenicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 • * Data compared to the previous version altered.



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification	
· Product identifier	
 Trade name: <u>Toxaphene</u> Article number: N9331001 Relevant identified uses of the substance or mixture and uses No further relevant information available. Application of the substance / the mixture Laboratory chemic 	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect CHEMTREC (within AU) +(61)-290372994)
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unbSTOT RE 2H373 May cause damage to organs through pro	



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. on page 3)

AU

Trade	name:	<i>Toxaphene</i>
-------	-------	------------------

		(Contd.	of page
\wedge			
$\langle ! \rangle$			
\mathbf{V}			
Skin Irrit. 2	1315 Causes skin irritation.		
STOT SE 3 I	1336 May cause drowsiness	or dizziness.	
· Label element			
· GHS label ele		conding to the Clobally Harmonized System (CHS)	
	rams GHS02, GHS07, GHS	cording to the Globally Harmonised System (GHS). 08	
· Signal word D			
· Hazard-detern	nining components of labell	ling:	
n-hexane			
· Hazard statem			
	lammable liquid and vapour		
H315 Causes : H361 Suspect	kin irritation. ed of damaging fertility or th	e unborn child	
	se drowsiness or dizziness.		
		h prolonged or repeated exposure.	
· Precautionary			
P210	1 10	parks/open flames/hot surfaces. No smoking.	
P241 P260		ectrical/ventilating/lighting equipment. me/gas/mist/vapours/spray.	
		: Remove/Take off immediately all contaminated clothing. R.	inse sk
	with water/shower.		
P403+P233		ed place. Keep container tightly closed.	
P501	Dispose of contents/c regulations.	container in accordance with local/regional/national/inter	nation
• Other hazards			
		ic halogen compounds (AOX), nitrates, heavy metal compo	ounds
formaldehydes	T and vPvB assessment		
• PBT: Not app			
· · · · · · · · · · · · · · · · · · ·			
• vPvB: Not app			
• vPvB: Not app			
	and Information on I	noredients	
	n and Information on I	ngredients	
Composition	racterisation: Mixtures		
Composition Chemical cha Description: M	racterisation: Mixtures Aixture of substances listed b	ngredients below with nonhazardous additions.	
Composition Chemical cha Description: N Dangerous co	racterisation: Mixtures Aixture of substances listed b mponents:	below with nonhazardous additions.	
Composition Chemical cha Description: M	racterisation: Mixtures Aixture of substances listed b mponents:	below with nonhazardous additions.	99.98%
Composition Chemical cha Description: N Dangerous co	racterisation: Mixtures Aixture of substances listed b mponents:	below with nonhazardous additions. Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304	99.98%
Composition Chemical chai Description: M Dangerous co 110-54-3 n-he	racterisation: Mixtures Aixture of substances listed b mponents: exane	below with nonhazardous additions.	99.98%
Composition Chemical chan Description: N Dangerous co 110-54-3 n-he	racterisation: Mixtures fixture of substances listed b mponents: mane mponents	below with nonhazardous additions. Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	99.98%
Composition Chemical chai Description: M Dangerous co 110-54-3 n-he	racterisation: Mixtures fixture of substances listed b mponents: mane mponents	below with nonhazardous additions. Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304	99.98%



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Toxaphene

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

• General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

• Precautions for safe handling No special precautions are necessary if used correctly.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters

· Ingredients with limit values that require monitoring at the workplace:

110-54-3 n-hexane

WES Long-term value: 72 mg/m³, 20 ppm

• Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 4)

• Eye protection:

Tig

Information on basic physical and chem	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	:: 69 ℃
Flash point:	$< 0 \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm^3
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 5)

• Solvent content: Organic solvents:

• Other information

100.0 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 6)

• *Other adverse effects No further relevant information available.*

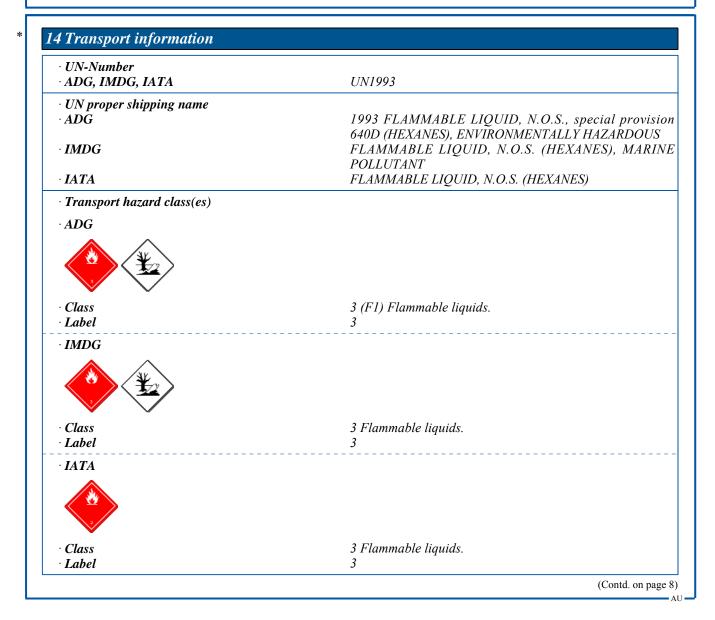
13 Disposal considerations

· Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.





Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances
· · · · · · · · · · · · · · · · · · ·	Toxaphene, n-hexane
Marine pollutant:	Yes
Ĩ	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F- E , S - E
Stowage Category	B
Transport in bulk according to Annex II o	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities $(\widetilde{E}Q)$	Code: E2
· · · · · ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN ''Model Regulation'':	UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIA
<u> </u>	PROVISION 640D (HEXANES), 3, II
	ENVIRONMENTALLY HAZARDOUS

Safety, hea	lth and environment	tal regulations/legislation specific for the substance or mixture	
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
8001-35-2	Toxaphene	Acute Tox. 3, H301 Carc. 2, H351 Acute Tox. 4, H312; Skin Irrit. 2, H315; STOT SE 3, H335	0.02%

· Named dangerous substances - ANNEX I None of the ingredients is listed.

(Contd. on page 9)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 8)

• Seveso category E2 Hazardous to the Aquatic Environment P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

• Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

• Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. · Department issuing SDS: Environmental, Health and Safety · Contact: Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488 · Abbreviations and acronyms RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances

- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

(Contd. on page 10)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Toxaphene

(Contd. of page 9)

Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2 Asp. Tox. 1: Aspiration hazard – Category 1

• * Data compared to the previous version altered.



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

I Identification	
· Product identifier	
• Trade name: <u>Chlordane</u> • Article number: N9331002 • Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. • Application of the substance / the mixture Laboratory chemicals	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Chlordane

	(Contd. of page
~	
Skin Irrit. 2 H.	315 Causes skin irritation.
STOT SE 3 H.	336 May cause drowsiness or dizziness.
· Label elements	
· GHS label elem	nents
The substance i	s classified and labelled according to the Globally Harmonised System (GHS).
	ams GHS02, GHS07, GHS08
· Signal word Da	inger
· Hazard-determ	ining components of labelling:
n-hexane	and components of meening.
· Hazard stateme	nts
	ummable liquid and vapour.
H315 Causes sk	
	l of damaging fertility or the unborn child.
	e drowsiness or dizziness.
H373 May caus	e damage to organs through prolonged or repeated exposure.
· Precautionary s	statements
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
<i>P303</i> + <i>P361</i> + <i>P</i> .	353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse sk with water/shower.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/internation regulations.
• Other hazards	
	pes not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds
formaldehydes.	
	and vPvB assessment
• PBT: Not appli	
• vPvB: Not appl	ICADIE.
	and Information on Inoralisate
<i>Composition</i>	and Information on Ingredients
· Chemical chard	acterisation: Mixtures

57-74-9 chlordane (ISO) & Carc. 2, H351 0.15 Acute Tox. 4, H302; Acute Tox. 4, H312 0.15	110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.9%
	57-74-9	chlordane (ISO)	Carc. 2, H351 Acute Tox. 4, H302; Acute Tox. 4, H312	0.1%



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Chlordane

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- · Description of first aid measures
- · General information:
- Do not leave affected persons unattended.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire Fighting Measures

- · Extinguishing media
- Suitable extinguishing agents:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
 Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
 Inform respective authorities in case of seepage into water course or sewage system.
 Prevent seepage into sewage system, workpits and cellars.
 Methods and material for containment and cleaning up:
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- · Reference to other sections
- See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

(Contd. on page 4)



Printing date 19.07.2018

Trade name: Chlordane

(Contd. of page 3)

7 Handling and Storage

- · Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about fire and explosion protection: Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

110-54-3 n-hexane

WES Long-term value: 72 mg/m³, 20 ppm

• Additional information: The lists valid during the making were used as basis.

- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 5)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Chlordane

(Contd. of page 4)

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:

Tightly sealed goggles

9 Physical and Chemical Properties

· Information on basic physical and chen	nical properties
General Information	
· Appearance:	
Form:	Liquid
Colour:	Transparent
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	:: 69 °C
· Flash point:	$< \theta \ ^{\circ}C$
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	240 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
• Explosive properties:	Product is not explosive. However, formation of explosive air/vapout mixtures are possible.
• Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
• Vapour pressure at 20 °C:	160 hPa
· Density at 20 °C:	0.66019 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
· Partition coefficient: n-octanol/water:	Not determined.
	(Contd. on page



 Printing date 19.07.2018
 Revision: 19.07.2018

 Trade name: Chlordane
 (Contd. of page 5)

 • Viscosity:
 Not determined.

 Dynamic:
 Not determined.

 Kinematic:
 Not determined.

 • Solvent content:
 99.9 %

 • Other information
 No further relevant information available.

10 Stability and Reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:
- The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
- Irritant
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
- Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

(Contd. on page 7)

AU -



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Chlordane

(Contd. of page 6)

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

· vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

UN-Number	
· ADG, IMDG, IATA	UN1993
· UN proper shipping name	
ADG	1993 FLAMMABLE LIQUID, N.O.S., special provision 640D (HEXANES), ENVIRONMENTALLY HAZARDOUS
IMDG	FLAMMABLE LIQUID, N.O.S. (HEXANES, chlordan
	(ISO)), MARINE POLLUTANT
· IATA	FLAMMABLE LIQUID, N.O.S. (HEXANES)
· Transport hazard class(es)	
ADG	
· Class	3 (F1) Flammable liquids.
· Label	3
IMDG	
· Class	3 Flammable liquids.
· Label	3



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

	(Contd. of page
IATA	
Class	3 Flammable liquids.
Label	3
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances chlordane (ISO), n-hexane
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree) Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	<i>F-E,<u>S-E</u></i>
Stowage Category	В
Transport in bulk according to Annex I and the IBC Code	I of Marpol Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	
Excepted quantities (EQ)	Code: E2 Maximum not quantity now inner nackaging: 20 ml
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	Maximum net quantity per outer packaging: 500 ml UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640D (HEXANES), 3, 11

Safety, health and environmental regulations/legislation specific for the substance or mixture				
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.9%	



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Chlordane (Contd. of page 8) 57-74-9 chlordane (ISO) 0.1% & Carc. 2, H351 Acute Tox. 4, H302; Acute Tox. 4, H312 · Directive 2012/18/EU · Named dangerous substances - ANNEX I None of the ingredients is listed. · Seveso category E2 Hazardous to the Aquatic Environment P5c FLAMMABLE LIQUIDS Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t · National regulations: · Information about limitation of use: Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases. • Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water. • Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Disclaimer The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product. · Relevant phrases H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. · Department issuing SDS: Environmental, Health and Safety · Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

 ICAO: International Civil Aviation Organisation
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association

(Contd. on page 10)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Chlordane

	(Contd. of page 9
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
Flam. Liq. 2: Flammable liquids – Category 2	
Acute Tox. 4: Acute toxicity – Category 4	
Skin Irrit. 2: Skin corrosion/irritation – Category 2	
Carc. 2: Carcinogenicity – Category 2	
Repr. 2: Reproductive toxicity – Category 2	
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3	
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2	
Asp. Tox. 1: Aspiration hazard – Category 1	
• * Data compared to the previous version altered.	



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

Product ide	- ntifier
Trade name Article num Relevant id No further 1	e: <u>STD Aroclor 1016</u> aber: N9331003 entified uses of the substance or mixture and uses advised against relevant information available. of the substance / the mixture Laboratory chemicals
	he supplier of the safety data sheet rer/Supplier:
Shelton, Co	port Avenue nnecticut 06484 USA areUS@perkinelmer.com
Supplier/Lo	cal:
530-540 Sp Glen Waver Melbourne VIC 3150 Australia 1-800-033 ausales@pe Emergency CHEMTRE CHEMTRE	5, Brandon Office Park ringvale Road Hey
Hazard(s) Identification
Classificati	on of the substance or mixture
	lame
Flam. Liq. 1	2 H225 Highly flammable liquid and vapour.
h	ealth hazard
Repr. 2 STOT RE 2	H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016 0	STOT SE 3 H3		
STOT SE 3 H336 May cause drowsiness or dizziness. Label elements GHS label elements The substance is classified and labelied according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard-determining components of labelling: n-hexare Intervention H315 Causes skin irritation. H315 Causes skin irritation. H316 Way cause dowsiness or dizziness. H373 May cause domsing ferility or the unborn child. H336 May cause dowsiness or dizziness. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazads Results of PBT and Py-B assessment PBT: Not applicable. PBT PDateable. Flam. Liq. 2, H225 Particable. Flam. Liq. 2, H225 Particable. Skin Irrit. 2	STOT SE 3 H3		
STOT SE 3 H336 May cause drowsiness or dizziness. Label elements GHS label elements The substance is classified and labelled according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard-determining components of labelling: n-hexane Hazard statements H1225 Highly flammable liquid and vapour. H315 Causes skin irritation. H315 Causes skin irritation. H316 Suspected of damaging fertility or the unborn child. H336 May cause dowsiness or dizziness. H771 Use explosion-proof electrical/ventilating/lighting equipment. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards Results of PBT and vPsB assessment PBT: Not applicable. PE <t< td=""><td>STOT SE 3 H3</td><td></td><td></td></t<>	STOT SE 3 H3		
STOT SE 3 H336 May cause drowsiness or dizziness. Label elements GHS label elements The substance is classified and labelied according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard-determining components of labelling: n-hexare Intervention H315 Causes skin irritation. H315 Causes skin irritation. H316 Way cause dowsiness or dizziness. H373 May cause domsing ferility or the unborn child. H336 May cause dowsiness or dizziness. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazads Results of PBT and Py-B assessment PBT: Not applicable. PBT PDateable. Flam. Liq. 2, H225 Particable. Flam. Liq. 2, H225 Particable. Skin Irrit. 2	STOT SE 3 H3		
Label elements GHS label elements The substance is classified and labelled according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard jetograms GHS02, GHS07, GHS08 Signal word Danger Hazard-determining components of labelling: n-hexane Namadel eliquid and vapour. H315 Causes skin irritation. H351 Scauses dowsiness or dizziness. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303 +P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403 +P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazard Tad VvB assessment PBT: Not applicable. VPB: Not applicable. VPB: Not applicable. VPB: Not applicable. VPB: Not applicable. Dispose components: Flam. Liq. 2, H225 Dagerous components:		15 Causes skin irritation.	
GHS label elements The substance is classified and labelled according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard statements Hazard statements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child. H361 Suspected of damage to organs through prolonged or repeated exposure. Precautionary statements Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. PBT: Not applicable. VPvB: Not applicable. VPvB: Not appl	I abol alamanta	36 May cause drowsiness or a	lizziness.
GHS label elements The substance is classified and labelled according to the Globally Harmonised System (GHS). Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard statements Hazard statements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child. H361 Suspected of damage to organs through prolonged or repeated exposure. Precautionary statements Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. PBT: Not applicable. VPvB: Not applicable. VPvB: Not appl	Ladel elements		
Hazard pictograms GHS02, GHS07, GHS08 Signal word Danger Hazard-determining components of labelling: n-hexane Hazard-determining components of labelling: n-hexane Hazard-datements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H737 May cause drowsiness or dizziness. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compoun. formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPB: Not applicable. VPB: Not applicable. Flam. Liq. 2, H225 Chemical characterisation: Mixtures <t< td=""><td></td><td>nts</td><td></td></t<>		nts	
Signal word Danger Hazard-determining components of labelling: n-hexane Hazard statements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child. H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303 +P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. Rework/Take off immediately closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compount formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPVB: Not applicable. PIT Disposed components: Interventilated place. Keep container dust. Dispose of contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results o			ing to the Globally Harmonised System (GHS).
Hazard-determining components of labelling: n-hexane Hazard statements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H315 Causes skin irritation. H316 Causes skin irritation. H317 May cause domaging fertility or the unborn child. H336 May cause domages to origans through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compount formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. PBT: Not applicable. VPvB: Not applicable. VPvB: Not applicable. Flam. Liq. 2, H225 Description: Mixture of substances listed below with nonhazardous additions. Dager			
n-hexane Hazard statements Hazard statements Hazard statements Hazard statements H325 Highly flammable liquid and vapour. H315 Causes skin irritation. H316 Suspected of damaging fertility or the unborn child. H336 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and PPVB assessment PBT: Not applicable. VPVB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane [10-54-4] n-hexane [2674-11-2] AROCLOR 1016 [2774-11-2]	Signal word Dar	ger	
Hazard statements H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child. H336 May cause dorowsiness or dizziness. H371 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P200 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPbB: Not applicable. VPvB: Not applicable. VPvB: Not applicable. PI flam. Liq. 2, H225 Description: Mixture of substances listed below with nonhazardous additions. Pager 2, H335; STOT RE 2, H373; Asp. Tox. 1, H304 110-54-3 n-hexane P Flam. Liq. 2, H225		ing components of labelling:	
H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H361 Suspected of damaging ferility or the unborn child. H336 May cause drowsiness or dizziness. H337 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Kee paway from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P200 Do not breathe dust/jume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. PBT: Not applicable. VevB: Not applicable. VPvB: Not applicable. Plam. Liq. 2, H225 Dangerous components: Plam. Liq. 2, H225 110-54-3 n-hexane Plam. Liq. 2, H315; STOT RE 2, H373; Asp. Tox. 1, H304 VPvB: Notaglicable Skin Irrit. 2, H315; STOT SE 3, H336			
H315 Cause's skin irritation. H315 Suspected of damaging fertility or the unborn child. H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. VPvB: Not applicable. VPvB: Not applicable. 200 Flam. Liq. 2, H225 Composition and Information on Ingredients Dangerous components: 110-54-3 n-hexane 110-54-3 n-hexane 210-54-11-2 AROCLOR 1016 0			
H361 Suspected of damaging fertility or the unborn child. H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P200 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT : Not applicable. VPvB : Not applicable. VPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Flam. Liq. 2, H225 Rept. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 X Kein Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			
H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. vPvB: Not applicable. VPvB: Not applicable. 110-54-3 n-hexane 110-54-3 n-hexane 26 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			born child
H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			oom onna.
Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. PVB: Not applicable. vPvB: Not applicable. VPvB: Not applicable. Plan. Liq. 2, H225 Pagerous components: Plan. Liq. 2, H225 110-54-3 n-hexane Plan. Liq. 2, H225 VP Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			olonged or repeated exposure.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P260 Do not breathe dust/filme/gas/mist/vapours/spray. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPvB. Not applicable. vPvB sostessment PBT: Not applicable. VPvB sostences listed below with nonhazardous additions. Dangerous components: I10-54-3 110-54-3 n-hexane Flam. Liq. 2, H225 110-54-3 n-hexane Stin Irrit. 2, H315; STOT SE 3, H336 Additional Components I2674-11-2 AROCLOR 1016			0 1 1
P260 Do not breathe dust/fume/gas/mist/vapours/spray. P P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounformaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPVB: Not applicable. VevB assessment PBT: Not applicable. Paplicable. VPvB: Not applicable. VevB is Not applicable. Plangerous components: Plan. Liq. 2, H225 Page. Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Additional Components Visin Irrit. 2, H315; STOT SE 3, H336 Additional Components 0 12674-11-2 AROCLOR 1016			ss/open flames/hot surfaces. No smoking.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable. VPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components I2674-11-2 AROCLOR 1016		Use explosion-proof electri	cal/ventilating/lighting equipment.
with water/shower. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat. regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound. formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. vPvB: Not applicable. VPvB: Not applicable. Dangerous components: 110-54-3 n-hexane Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016 (
P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable. VPvB is Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane VFlam. Liq. 2, H225 Very Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 94 Additional Components Very Age CLOR 1016 0	P303+P361+P3		move/Take off immediately all contaminated clothing. Rinse sl
P501 Dispose of contents/container in accordance with local/regional/national/internat regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane VF Flam. Liq. 2, H225 Skin Irrit. 2, H315; STOT RE 2, H373; Asp. Tox. 1, H304 VS Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016	D 402 - D222		
regulations. Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane VP Flam. Liq. 2, H225 VP Sin Irrit. 2, H315; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			
Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane VSkin Irrit. 2, H315; STOT RE 2, H373; Asp. Tox. 1, H304 VSkin Irrit. 2, H315; STOT SE 3, H336	F 301		ainer in accordance with local/regional/national/internation
The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compound formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vvvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Vertical Components Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016	Other hazards	regulations.	
formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane 110-54-3 n-hexane Vertical characteris (Storn RE 2, H373; Asp. Tox. 1, H304 Vertical Components Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016	-	es not contain any organic h	alogen compounds (AOX), nitrates, heavy metal compounds
PBT: Not applicable. vPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Vertical Components Vertical Components 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 110-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3 120-54-3		2 0	
VPvB: Not applicable. Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Image: Skin Irrit. 2, H315; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016			
Composition and Information on Ingredients Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Image: State of State			
Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane In-hexane Image: Flam. Liq. 2, H225 Image: Skin Irrit. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Image: Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016	vPvB: Not applie	able.	
Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Illo-54-3 N-hexane Illo-54-3 </td <td></td> <td></td> <td></td>			
Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane In-hexane Image: Flam. Liq. 2, H225 Image: Skin Irrit. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Image: Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016	Composition	ind Information on Inor	edients
Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: 110-54-3 n-hexane Plane Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 99 Skin Irrit. 2, H315; STOT SE 3, H336 99 Additional Components 12674-11-2 AROCLOR 1016 0	Composition	ina injormation on ingr	curents
Dangerous components: 110-54-3 n-hexane Image: Star and star			
110-54-3 n-hexane Image: Flam. Liq. 2, H225 95 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Image: Skin Irrit. 2, H315; STOT SE 3, H336 95 Additional Components Image: Skin Irrit. 2, H315; STOT SE 3, H336 0 12674-11-2 AROCLOR 1016 0	Description: Mix	ture of substances listed below	v with nonhazardous additions.
Additional Components 12674-11-2 AROCLOR 1016 0	-		
Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Additional Components 12674-11-2 AROCLOR 1016 0	110-54-3 n-hexa	ne	♦ Flam. Liq. 2, H225 99.95
Additional Components 12674-11-2 AROCLOR 1016			🐼 Repr. 2, Ĥ361; STOT RE 2, H373; Asp. Tox. 1, H304
12674-11-2 AROCLOR 1016 0			() Skin Irrit. 2, H315; STOT SE 3, H336
12674-11-2 AROCLOR 1016 0	Additional Com	onents	
	-		0.12
			(Contd. on page



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: STD Aroclor 1016

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

• Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.

• Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Store in cool, dry place in tightly closed receptacles.

(Contd. on page 4)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Information on basic physical and chen	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	: 69 °C
Flash point:	$< 0 \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	$0.66 g/cm^3$
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

(Contd. of page 5)

• Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018

Trade name: STD Aroclor 1016

(Contd. of page 6)

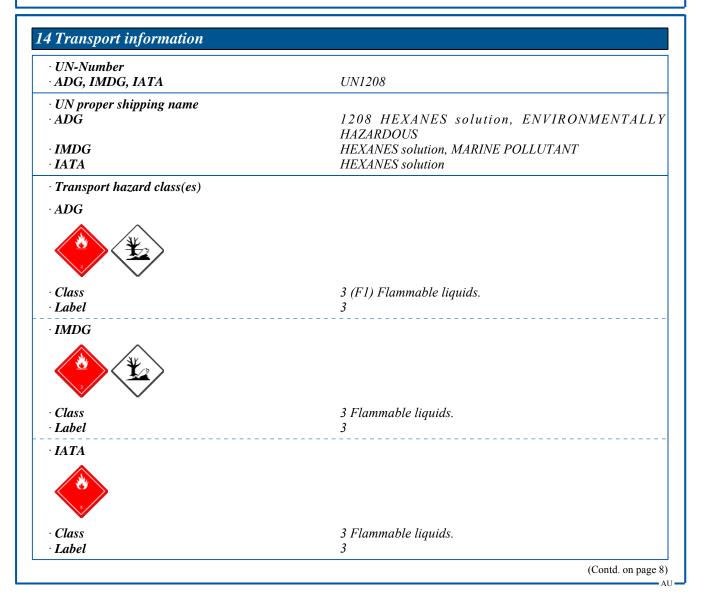
• *Other adverse effects No further relevant information available.*

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.





*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
	hexane
Marine pollutant:	Yes
r i i i i i i i i i i i i i i i i i i i	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F-E,S-D
Stowage Category	Ε
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES SOLUTION, 3, 1
-	ENVIRONMENTALLY HAZARDOUS

110-54-3 n	-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 	99.9%
		🚯 Skin Irrit. 2, H315; STOT SE 3, H336	
12674-11-2 A	ROCLOR 1016		0.1%
· Seveso catego	ry s to the Aquatic Environ	EX I None of the ingredients is listed.	
P5c FLAMMA			



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1016

(Contd. of page 8)

· National regulations:

• Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

l Identification	
· Product identifier	
 Trade name: <u>STD Aroclor 1221</u> Article number: N9331004 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Laboratory chemicals 	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1221

		(Contd. of page 1)
$\mathbf{\wedge}$		
$\langle 1 \rangle$		
\sim		
Skin Irrit. 2 H3	15 Causes skin irritation.	
STOT SE 3 H3	36 May cause drowsiness	or dizziness.
· Label elements		
· GHS label eleme		
		cording to the Globally Harmonised System (GHS).
· Hazara piciogra · Signal word Dai	ms GHS02, GHS07, GHS0 19er	0
0	ning components of labelli	ng.
n-hexane	ung components of tubett	ng.
Hazard statemer	ıts	
	nmable liquid and vapour.	
H315 Causes ski		1 1.11
	of damaging fertility or the drowsiness or dizziness.	e unborn child.
		h prolonged or repeated exposure.
· Precautionary st	e e e	
P210	Keep away from heat/sp	oarks/open flames/hot surfaces. No smoking.
P241		ctrical/ventilating/lighting equipment.
P260		ne/gas/mist/vapours/spray.
P303+P301+P3	<i>with water/shower.</i>	Remove/Take off immediately all contaminated clothing. Rinse skin
P403+P233		ed place. Keep container tightly closed.
P501		ontainer in accordance with local/regional/national/international
• Other hazards		
	es not contain any organi	ic halogen compounds (AOX), nitrates, heavy metal compounds of
formaldehydes.	1	
• Results of PB1 • PBT: Not applic	and vPvB assessment	
• vPvB: Not applie		
The second se		
	170 / 7	7 • ,
6 Composition	and Information on In	igredients
· Chemical chara	cterisation: Mixtures	
• Description: Mix	cture of substances listed be	elow with nonhazardous additions.
· Dangerous com	oonents:	
110-54-3 n-hexa	ine	🚯 Flam. Liq. 2, H225 99.9%
		🐼 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304
		🚯 Skin Irrit. 2, H315; STOT SE 3, H336
· Additional Com	vonents	
-	ponents HLOROPHENYL PHENYI	LETHER 0.1%



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: STD Aroclor 1221

• Additional information: For the wording of the listed hazard phrases refer to section 16.

<u> 4 First Aid Measures</u>

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters

· Protective equipment: Wear self contained breathing apparatous for fire fighting if necessary

6 Accidental Release Measures

 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Prevent seepage into sewage system, workpits and cellars.

• *Methods and material for containment and cleaning up:* Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

• Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

• Precautions for safe handling Store in cool, dry place in tightly closed receptacles.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1221

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1221

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Information on basic physical and chen	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	: 69 °C
Flash point:	$< \theta \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm^3
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1221

(Contd. of page 5)

• Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018

Trade name: STD Aroclor 1221

(Contd. of page 6)

• *Other adverse effects No further relevant information available.*

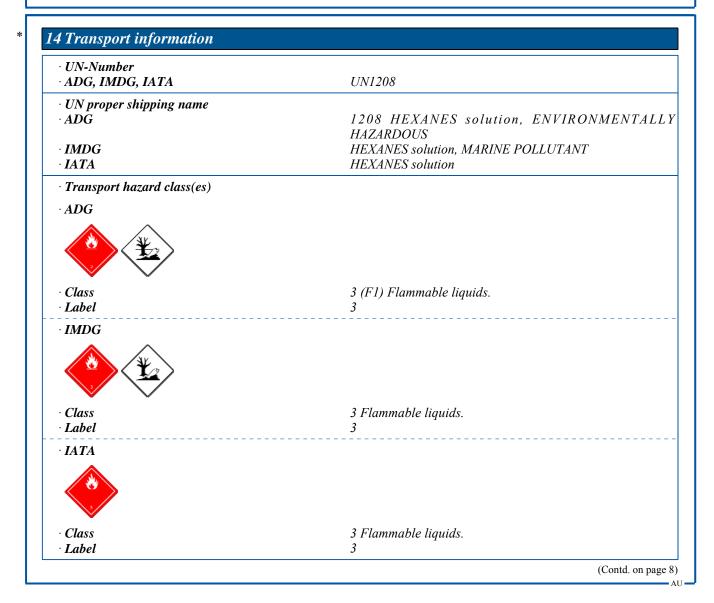
13 Disposal considerations

· Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.





Printing date 19.07.2018

Revision: 19.07.2018

Trade name: STD Aroclor 1221

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
····	hexane
Marine pollutant:	Yes
-	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F- E , S - D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN ''Model Regulation'':	UN 1208 HEXANES SOLUTION, 3, I
-	ENVIRONMENTALLY HAZARDOUS

· sajety, neu	lth and environmental regulations/legislation specific for the substance or mixt	ure
110-54-3	n-hexane	99.9%
	🚸 Flam. Liq. 2, H225	
	Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	
	🚯 Skin Irrit. 2, H315; STOT SE 3, H336	
11104-28-2	4-CHLOROPHENYL PHENYL ETHER	0.1%
• Named dan • Seveso cate	gerous substances - ANNEX I None of the ingredients is listed. gory ous to the Aquatic Environment	



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 8)

Trade name: STD Aroclor 1221

• Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

* * Data compared to the previous version altered.



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

I Identifica	
• Article num • Relevant ide No further r	ntiter e: <u>Aroclor 1232</u> ober: N9331005 entified uses of the substance or mixture and uses advised against relevant information available. of the substance / the mixture Laboratory chemicals
· Details of th · Manufactur	he supplier of the safety data sheet rer/Supplier:
	port Avenue nnecticut 06484 USA areUS@perkinelmer.com
Supplier/Loc	cal:
530-540 Spi Glen Waver Melbourne VIC 3150 Australia 1-800-033-3 ausales@pe Emergency CHEMTREG CHEMTREG	5, Brandon Office Park ringvale Road ley
2 Hazard(s)	Identification
· Classificatio	on of the substance or mixture
fl.	ame
Flam. Liq. 2	P H225 Highly flammable liquid and vapour.
h	ealth hazard
Repr. 2 STOT RE 2	H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.



Printing date 19.07.2018

Revision: 19.07.2018

	Trade	name:	Aroclor	1232
--	-------	-------	---------	------

	(Contd. of page 1)
\wedge	
\mathbf{v}	
Skin Irrit. 2 H315 Causes skin irritation.	
STOT SE 3 H336 May cause drowsiness of	or dizziness.
· Label elements	
GHS label elements	
	ording to the Globally Harmonised System (GHS).
• Hazard pictograms GHS02, GHS07, GHS08	8
· Signal word Danger	
• Hazard-determining components of labellin	ng:
n-hexane	
• Hazard statements	
H225 Highly flammable liquid and vapour. H315 Causes skin irritation.	
H361 Suspected of damaging fertility or the	unborn child
H336 May cause drowsiness or dizziness.	
H373 May cause damage to organs through	prolonged or repeated exposure.
· Precautionary statements	
1 10 1	arks/open flames/hot surfaces. No smoking.
	ctrical/ventilating/lighting equipment.
	e/gas/mist/vapours/spray. Remove/Take off immediately all contaminated clothing. Rinse skin
with water/shower.	Removel fuke off immediately all contaminated clothing. Rinse skin
	d place. Keep container tightly closed.
	ontainer in accordance with local/regional/national/international
regulations.	
• Other hazards	
The product does not contain any organic formaldehydes.	c halogen compounds (AOX), nitrates, heavy metal compounds or
• Results of PBT and vPvB assessment	
• PBT: Not applicable.	
• vPvB: Not applicable.	
3 Composition and Information on In	greatents
· Chemical characterisation: Mixtures	
• Description: Mixture of substances listed be	low with nonhazardous additions.
· Dangerous components:	
110-54-3 n-hexane	📀 Flam. Liq. 2, H225 99.9%
	🐼 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304
	🚯 Skin Irrit. 2, H315; STOT SE 3, H336
· Additional Components	
11141-16-5 Aroclor 1232	0.1%
	(Contd. on page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1232

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1232

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1232

(Contd. of page 4)

• Eye protection:

Tig

•¢	Tightly sealed goggles
1 1	

Information on basic physical and chem	nical properties
General Information	
Appearance:	T1
Form:	Liquid
Colour:	Transparent Characteristic
Odour: Odour threshold:	Characteristic Not determined.
pH-value:	Not determined.
Change in condition	05.00
Melting point/freezing point: Initial boiling point and boiling range	-95 °C
Flash point:	< 0 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

ΑU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1232

(Contd. of page 5)

 Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



 Printing date 19.07.2018
 Revision: 19.07.2018

 Trade name: Aroclor 1232
 (Contd. of page 6)

• *Other adverse effects No further relevant information available.*

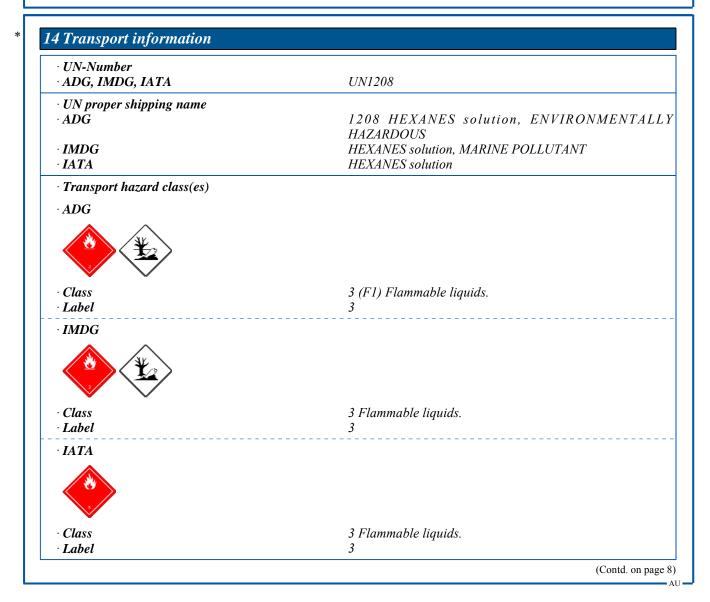
13 Disposal considerations

· Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.





Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1232

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
	hexane
Marine pollutant:	Yes
-	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F- E , S - D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES SOLUTION, 3, I
<u> </u>	ENVIRONMENTALLY HAZARDOUS

· Safety, heal	th and environmental reg	gulations/legislation specific for the substance or mixture	
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.9%
11141-16-5	Aroclor 1232		0.1%
· Directive 20		IEX I None of the ingredients is listed.	



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1232

(Contd. of page 8)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.

ΔIJ



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification	
· Product identifier	
 Trade name: <u>Aroclor 1242</u> Article number: N9331006 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Laboratory chemicals 	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

		(Contd. of page 1
\wedge		
Skin Irvit 2 H3	215 Causes skin irritatio	14
	36 May cause drowsine	
· Label elements		
· GHS label elem	ents	
		according to the Globally Harmonised System (GHS).
• Hazard pictogra • Signal word Dai	u ms GHS02, GHS07, GH nger	508
0	ning components of labo	allina.
n-hexane	ning components of tabe	euing.
Hazard statemen		
H225 Highly fla H315 Causes ski	mmable liquid and vapor	ur.
	of damaging fertility or	the unborn child.
	e drowsiness or dizziness	
		ugh prolonged or repeated exposure.
• Precautionary so P210		t/sparks/open flames/hot surfaces. No smoking.
P241		electrical/ventilating/lighting equipment.
P260		fume/gas/mist/vapours/spray.
P303+P361+P3	353 IF ON SKIN (or hai	r): Remove/Take off immediately all contaminated clothing. Rinse ski
D (01 - D011	with water/shower.	
P403+P233 P501		ated place. Keep container tightly closed. c/container in accordance with local/regional/national/internation
1 501	regulations.	
Other hazards	-8	
	es not contain any orgo	anic halogen compounds (AOX), nitrates, heavy metal compounds o
formaldehydes.	and vPvB assessment	
• PBT: Not applie		
vPvB: Not appli		
	cuore.	
Composition	and Information on	Ingredients
	A station Mindae	
	cterisation: Mixtures	l below with nonhazardous additions.
· Dangerous com	•	
110-54-3 n-hext		6 Flam. Liq. 2, H225 99.9%
110 57 5 11 110	ane	Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304
		Skin Irrit. 2, H315; STOT SE 3, H336
Additional Com	ponents	1 7
	•	
53469-21-9 Chi	orodiphenyl (42% chlori	(0.1%)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1242

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire Fighting Measures

- · Extinguishing media
- Suitable extinguishing agents:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1242

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1242

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Physical and Chemical Propertie	S
Information on basic physical and chem	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour: Odour:	Transparent Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	
Flash point:	< 0 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 •C:	160 hPa
Density at 20 °C:	0.66 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1242

(Contd. of page 5)

 Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



according to WHS Regulations Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1242 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES, MARINE POLLUTANT $\cdot IATA$ **HEXANES** • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 · IMDG · Class 3 Flammable liquids. · Label 3 ·IATA · Class 3 Flammable liquids. · Label 3 (Contd. on page 8)

AU -



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1242

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
	hexane
Marine pollutant:	Yes
-	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F-E,S-D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES, 3, II, ENVIRONMENTALI
-	HAZARDOUS

· Safety, heal	th and environmental regulations/legislation specific for the substance or mixtu	ıre
110-54-3	n-hexane	99.99
	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 	
	🗞 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304	
	🚯 Skin Irrit. 2, H315; STOT SE 3, H336	
53469-21-9	Chlorodiphenyl (42% chlorine)	0.1%
• Directive 20	117/18/161/	



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 8)

Trade name: Aroclor 1242

• Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2 Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT SE 5: Specific target organ toxicity (single exposure) – Category 5 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

* * Data compared to the previous version altered.



*

according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification	
· Product identifier	
 Trade name: <u>Aroclor 1248</u> Article number: N9331007 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Laboratory chemicals 	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 1)

(!	>
Skin Ir	rit. 2 H315 Causes skin irritation.
STOT	SE 3 H336 May cause drowsiness or dizziness.

· Signal word Danger

· Hazard-determining components of labelling:

n-hexane

· Hazard statements

H225 Highly flammable liquid and vapour.

- H315 Causes skin irritation.
- H361 Suspected of damaging fertility or the unborn child.
- H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- *P403+P233* Store in a well-ventilated place. Keep container tightly closed.
- *P501* Dispose of contents/container in accordance with local/regional/national/international regulations.
- Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

	• Dangerous compo	ients:		
	110-54-3 n-hexar	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox Skin Irrit. 2, H315; STOT SE 3, H336 	. 1, H304	99.9%
Γ	· Additional Compo	ients		
	12672-29-6 ARO	LOR 1248		0.1%
			(Contd. or	n page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1248

• Additional information: For the wording of the listed hazard phrases refer to section 16.

<u>4 First Aid M</u>easures

· Description of first aid measures

• General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1248

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters

· Ingredients with limit values that require monitoring at the workplace:

110-54-3 n-hexane

WES Long-term value: 72 mg/m³, 20 ppm

• Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1248

(Contd. of page 4)

• Eye protection:

Tig

	Tightly sealed goggles
÷ .	

Information on basic physical and chem	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	:: 69 ℃
Flash point:	$< 0 \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	$0.66 \ g/cm^3$
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1248

(Contd. of page 5)

 Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1248 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES solution, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES solution, MARINE POLLUTANT $\cdot IATA$ HEXANES solution • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 · IMDG · Class 3 Flammable liquids. · Label 3 · IATA 3 Flammable liquids. · Class · Label 3

(Contd. on page 8)

AU



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1248

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
·····	hexane
Marine pollutant:	Yes
	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F- E , S - D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN ''Model Regulation'':	UN 1208 HEXANES SOLUTION, 3, 1.
<u> </u>	ENVIRONMENTALLY HAZARDOUS

Safety, health and environmental regulations/legislation specific for the substance or mixture			
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.9%
12672-29-6	AROCLOR 1248		0.1%
· Named dan · Seveso cate	gerous substances - ANNI gory	EX I None of the ingredients is listed.	
• Seveso cate E2 Hazard	gerous substances - ANNI gory ous to the Aquatic Environ		
• Named dan • Seveso cate E2 Hazard	gerous substances - ANNI gory ous to the Aquatic Environ		
Named dan Seveso cate E2 Hazard P5c FLAM Qualifying	gerous substances - ANNE gory ous to the Aquatic Environ MABLE LIQUIDS quantity (tonnes) for the a		



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1248

(Contd. of page 8)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

· Product ider	tion ntifier
• Trade name • Article num • Relevant ide No further re	: <u>Aroclor 1254</u> ber: N9331008 entified uses of the substance or mixture and uses advised against elevant information available. of the substance / the mixture Laboratory chemicals
• Details of th • Manufactur	ne supplier of the safety data sheet ver/Supplier:
	ort Avenue inecticut 06484 USA ireUS@perkinelmer.com
Supplier/Loc	 cal:
530-540 Spr Glen Waverl Melbourne VIC 3150 Australia 1-800-033-3 ausales@pet Emergency CHEMTREC CHEMTREC	5, Brandon Office Park ingvale Road ley
Hazard(s)	Identification
· Classificatio	on of the substance or mixture
fla	ame
Flam. Liq. 2	H225 Highly flammable liquid and vapour.
he	ealth hazard
Repr. 2 STOT RE 2	H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclo	or 1254
	(Contd. of page 1)
Skin Irrit 2 H ²	315 Causes skin irritation.
	336 May cause drowsiness or dizziness.
• Label elements • GHS label elem The substance is	ents s classified and labelled according to the Globally Harmonised System (GHS). ums GHS02, GHS07, GHS08
n-hexane • Hazard stateme H225 Highly fla H315 Causes sk H361 Suspected	mmable liquid and vapour.
	e damage to organs through prolonged or repeated exposure.
• Precautionary s P210 P241 P260 P303+P361+P2	 tatements Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Do not breathe dust/fume/gas/mist/vapours/spray. 353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P233 P501	Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.
• Other hazards	
formaldehydes.	
3 Composition	and Information on Ingredients

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:	
110-54-3 n-hexane <i>Flam. Liq. 2, H225</i> <i>Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304</i> <i>Skin Irrit. 2, H315; STOT SE 3, H336</i>	99.9%
· Additional Components	
11097-69-1 Chlorodiphenyl (54% chlorine)	0.1%
(Contd. c	on page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1254

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1254

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1254

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Physical and Chemical Propertie	
Information on basic physical and chem	nical properties
General Information Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	2: 69 °C
Flash point:	$< 0 \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 •C:	160 hPa
Density at 20 °C:	0.66 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1254

(Contd. of page 5)

 Solvent content: Organic solvents:

· Other information

99.9 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1254 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES, MARINE POLLUTANT $\cdot IATA$ **HEXANES** • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 · IMDG · Class 3 Flammable liquids. · Label 3 ·IATA · Class 3 Flammable liquids. · Label 3 (Contd. on page 8)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1254

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
·····	hexane
Marine pollutant:	Yes
	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F-E,S-D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES, 3, II, ENVIRONMENTALL
0	HAZARDOUS

· Safety, hea	th and environmental regulations/legislation specific for the substance or mixi	ture
110-54-3	n-hexane	99.9%
	🚸 Flam. Liq. 2, H225	
	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 	
	Skin Irrit. 2, H315; STOT SE 3, H336	
11097-69-1	Chlorodiphenyl (54% chlorine)	0.1%
· Directive 2	012/18/EU	



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 8)

Trade name: Aroclor 1254

• Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2 Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT SE 5: Specific target organ toxicity (single exposure) – Category 5 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

• * Data compared to the previous version altered.

AU



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification	
· Product identifier	
 Trade name: <u>Aroclor 1260</u> Article number: N9331009 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Laboratory chemicals 	
• Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260		
	(Contd. of page 1	
	15 Causes skin irritation.36 May cause drowsiness or dizziness.	
	classified and labelled according to the Globally Harmonised System (GHS). ms GHS02, GHS07, GHS08	
n-hexane Hazard statemen H225 Highly fla H315 Causes ski H361 Suspected H336 May cause H373 May cause Precautionary st P210 P241 P260 P303+P361+P3 P403+P233 P501 Other hazards	mmable liquid and vapour. in irritation. of damaging fertility or the unborn child. e drowsiness or dizziness. e damage to organs through prolonged or repeated exposure.	
• Results of PBT a • PBT: Not applic • vPvB: Not appli		

3 Composition and Information on Ingredients

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

• Dangerous components:		
110-54-3 n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
· Additional Components		
11096-82-5 aroclor 1260		0.02%
	(Contd	. on page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1260

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system.

Prevent seepage into sewage system, workpits and cellars.

• Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters

· Ingredients with limit values that require monitoring at the workplace:

110-54-3 n-hexane

WES Long-term value: 72 mg/m³, 20 ppm

• Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Information on basic physical and chen	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	: 69 °C
Flash point:	$< \theta \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapou mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260

(Contd. of page 5)

• Solvent content: Organic solvents:

• Other information

100.0 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



according to WHS Regulations Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1260 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES solution, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES solution, MARINE POLLUTANT $\cdot IATA$ HEXANES solution • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 · IMDG · Class 3 Flammable liquids. · Label 3 · IATA 3 Flammable liquids. · Class · Label 3

(Contd. on page 8)

AU



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
	hexane
Marine pollutant:	Yes
1	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F-E,S-D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES SOLUTION, 3, 1
-	ENVIRONMENTALLY HAZARDOUS

• Named dangerous substances - ANNEX I None of the ingredients is listed. • Seveso category E2 Hazardous to the Aquatic Environment P5c FLAMMABLE LIQUIDS	sajety, heal	in unu christonnentut i	egulations/legislation specific for the substance or mixture	
 Directive 2012/18/EU Named dangerous substances - ANNEX I None of the ingredients is listed. Seveso category E2 Hazardous to the Aquatic Environment 	110-54-3	n-hexane	(3) Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304	99.989
• Named dangerous substances - ANNEX I None of the ingredients is listed. • Seveso category E2 Hazardous to the Aquatic Environment P5c FLAMMABLE LIQUIDS	11096-82-5	aroclor 1260		0.02%
P5c FLAMMABLE LIQUIDS				
	Named dang Seveso categ	gerous substances - AN gory		
	Named dang Seveso categ E2 Hazardo	gerous substances - AN gory ous to the Aquatic Envir		
• Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t (Contd	Named dang Seveso categ E2 Hazardo P5c FLAMM Qualifying o	gerous substances - AN gory ous to the Aquatic Envir AABLE LIQUIDS quantity (tonnes) for the	conment e application of lower-tier requirements 200 t	



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1260

(Contd. of page 8)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 *Outside the USA:* 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.

AU



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

· Product ide	tion ntifier
• Trade name • Article num • Relevant ide No further r	e: <u>Aroclor 1262</u> ber: N9331010 entified uses of the substance or mixture and uses advised against relevant information available. of the substance / the mixture Laboratory chemicals
· Details of th · Manufactur	he supplier of the safety data sheet rer/Supplier:
	port Avenue nnecticut 06484 USA areUS@perkinelmer.com
Supplier/Lo	 cal:
530-540 Spi Glen Waver Melbourne VIC 3150 Australia 1-800-033-3 ausales@pe Emergency CHEMTRE CHEMTRE	5, Brandon Office Park ringvale Road ley
e Hazard(s)	Identification
· Classificatio	on of the substance or mixture
fl	ame
Flam. Liq. 2	P H225 Highly flammable liquid and vapour.
h.	ealth hazard
Repr. 2 STOT RE 2	H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.



Printing date 19.07.2018

Revision: 19.07.2018

rade name: Arocle	or 1262
^	(Contd. of page
Skin Irrit 2 H	315 Causes skin irritation.
	336 May cause drowsiness or dizziness.
· Label elements	
• GHS label elem	
	s classified and labelled according to the Globally Harmonised System (GHS). ams GHS02, GHS07, GHS08
· Signal word Da	
-	
• Hazara-aetermi n-hexane	ining components of labelling:
• Hazard stateme	nto
	amable liquid and vapour.
H315 Causes sk	
	l of damaging fertility or the unborn child.
	e drowsiness or dizziness.
	e damage to organs through prolonged or repeated exposure.
· Precautionary s	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P.	353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse sk
	with water/shower.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/internation regulations.
• Other hazards	
The product do formaldehydes.	pes not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds
	and vPvB assessment
• PBT: Not applie	
· vPvB: Not appl	icable

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
110-54-3 n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
· Additional Components		
37324-23-5 AROCLOR 1262		0.02%
	(Contd	. on page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1262

• Additional information: For the wording of the listed hazard phrases refer to section 16.

<u>4 First Aid Measures</u>

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Leform upper poting authorities in aggs of
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1262

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- 110-54-3 n-hexane
- WES Long-term value: 72 mg/m³, 20 ppm
- Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1262

(Contd. of page 4)

• Eye protection:

Tig

Tightly sealed	goggles
Tignity seureu	goggies

Information on basic physical and chem	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	:: 69 °C
Flash point:	$< 0 \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm^3
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1262

(Contd. of page 5)

• Solvent content: Organic solvents:

· Other information

100.0 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1262 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES solution, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES solution, MARINE POLLUTANT $\cdot IATA$ HEXANES solution • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 ·IMDG · Class 3 Flammable liquids. · Label 3 · IATA 3 Flammable liquids. · Class · Label 3

(Contd. on page 8)

AU



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1262

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances: r
	hexane
Marine pollutant:	Yes
r	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F- E , S - D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES SOLUTION, 3, I
-	ENVIRONMENTALLY HAZARDOUS

Safety, heal	th and environmental reg	gulations/legislation specific for the substance or mixture	
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
37324-23-5	AROCLOR 1262		0.02%
		EVI None of the inervedients is listed	
· Seveso cate	gerous substances - ANN	EX I None of the ingredients is listed.	
• Named dan • Seveso cate E2 Hazard	gerous substances - ANN gory		
• Named dan • Seveso cate E2 Hazard P5c FLAM	gerous substances - ANN gory ous to the Aquatic Environ MABLE LIQUIDS		
• Named dan • Seveso cate E2 Hazard P5c FLAM • Qualifying	gerous substances - ANN gory ous to the Aquatic Environ MABLE LIQUIDS quantity (tonnes) for the d	application of lower-tier requirements 200 t application of upper-tier requirements 500 t	l. on page



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1262

(Contd. of page 8)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.

ΔIJ



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification	
· Product identifier	
 Trade name: <u>Aroclor 1268</u> Article number: N9331011 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Laboratory chemicals 	
· Details of the supplier of the safety data sheet · Manufacturer/Supplier:	
PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600	
Supplier/Local:	
PerkinElmer Australia Lvl 2, Bldg 5, Brandon Office Park 530-540 Springvale Road Glen Waverley Melbourne VIC 3150 Australia 1-800-033-391 ausales@perkinelmer.com • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994	
2 Hazard(s) Identification	
· Classification of the substance or mixture	
flame	
Flam. Liq. 2 H225 Highly flammable liquid and vapour.	
health hazard	
Repr. 2H361 Suspected of damaging fertility or the unborn child.STOT RE 2H373 May cause damage to organs through prolonged or repeated exposure.	(Contd. on page 2



Printing date 19.07.2018

Revision: 19.07.2018

ade name: Arocle	or 1268
	(Contd. of page 1
$\mathbf{\Lambda}$	
$\mathbf{\vee}$	
Skin Irrit. 2 H.	315 Causes skin irritation.
STOT SE 3 H.	336 May cause drowsiness or dizziness.
· Label elements	
· GHS label elem	
	s classified and labelled according to the Globally Harmonised System (GHS).
	ams GHS02, GHS07, GHS08
· Signal word Da	inger
	ining components of labelling:
n-hexane	
• Hazard stateme	
	ummable liquid and vapour.
H315 Causes sk	in irritation. I of damaging fertility or the unborn child.
	e drowsiness or dizziness.
	e damage to organs through prolonged or repeated exposure.
· Precautionary s	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P.	353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/internationa regulations.
• Other hazards	
The product do formaldehydes.	pes not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds o
	and vPvB assessment
• PBT: Not applied	
	icable.

· Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
110-54-3 n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
· Additional Components		
11100-14-4 AROCLOR 1268		0.02%
· · · ·	(Contd	. on page 3)



Printing date 19.07.2018

Revision: 19.07.2018

(Contd. of page 2)

Trade name: Aroclor 1268

• Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.

• After swallowing: If symptoms persist consult doctor.

• Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire Fighting Measures

· Extinguishing media

• Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
 Environmental precautions:
- Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· Handling:

· Precautions for safe handling Use solvent-proof equipment.

(Contd. on page 4)



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1268

(Contd. of page 3)

- Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters

· Ingredients with limit values that require monitoring at the workplace:

110-54-3 n-hexane

WES Long-term value: 72 mg/m³, 20 ppm

• Additional information: The lists valid during the making were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.
- Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1268

(Contd. of page 4)

• Eye protection:

Tightly sealed goggles

Information on basic physical and chen	nical properties
General Information	
Appearance:	
Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	-95 °C
Initial boiling point and boiling range	: 69 °C
Flash point:	$< \theta \ ^{\circ}C$
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapou mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapour pressure at 20 °C:	160 hPa
Density at 20 °C:	0.66 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	0.1 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1268

(Contd. of page 5)

• Solvent content: Organic solvents:

· Other information

100.0 % No further relevant information available.

10 Stability and Reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects
- · Acute toxicity
- Primary irritant effect:
- · Skin corrosion/irritation Irritant to skin and mucous membranes.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Repr. 2

12 Ecological Information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)



according to WHS Regulations Printing date 19.07.2018 Revision: 19.07.2018 Trade name: Aroclor 1268 (Contd. of page 6) · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system. · Uncleaned packaging: · Recommendation: Disposal must be made according to official regulations. 14 Transport information · UN-Number · ADG, IMDG, IATA UN1208 · UN proper shipping name ·ADG 1208 HEXANES, ENVIRONMENTALLY HAZARDOUS · IMDG HEXANES, MARINE POLLUTANT · IATA **HEXANES** • Transport hazard class(es) ·ADG · Class 3 (F1) Flammable liquids. · Label 3 · IMDG · Class 3 Flammable liquids. · Label 3 ·IATA · Class 3 Flammable liquids. · Label 3 (Contd. on page 8)

- AU -



according to WHS Regulations

Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1268

	(Contd. of page
Packing group	
ADG, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances:
-	hexane
Marine pollutant:	Yes
-	Symbol (fish and tree)
Special marking (ADG):	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS Number:	F-E,S-D
Stowage Category	E
Transport in bulk according to Annex II of	f Marpol
and the IBC Code	Not applicable.
Transport/Additional information:	
ADG	
Limited quantities (LQ)	lL
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1208 HEXANES, 3, II, ENVIRONMENTALL
<u> </u>	HAZARDOUS

· Safety, heal	th and environmental reg	ulations/legislation specific for the substance or mixture	
110-54-3	n-hexane	 Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	99.98%
11100-14-4	AROCLOR 1268		0.02%
· Directive 20		TVI Novo of the increase director in line of	
· Named dan · Seveso cate	gerous substances - ANN gory	EX I None of the ingredients is listed.	
• Named dan • Seveso cate E2 Hazard	gerous substances - ANN gory ous to the Aquatic Environ		
Named dan Seveso cate E2 Hazard P5c FLAM	gerous substances - ANN gory ous to the Aquatic Environ MABLE LIQUIDS		
• Named dan • Seveso cate E2 Hazard P5c FLAM • Qualifying	gerous substances - ANN gory ous to the Aquatic Environ MABLE LIQUIDS quantity (tonnes) for the d	ament application of lower-tier requirements 200 t application of upper-tier requirements 500 t	. on page



Printing date 19.07.2018

Revision: 19.07.2018

Trade name: Aroclor 1268

(Contd. of page 8)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 *Outside the USA:* 1-(203)-712-8488

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2 Asp. Tox. 1: Aspiration hazard – Category 1 * * Data compared to the previous version altered.

AU