according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Mix- HICAL Acids Method 8270C**
· **Article number:** N9331031
· **1.2 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

· **1.3 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
PerkinElmer, Inc.
Chalfont Road Buckinghamshire
Seer Green HP9 2FX
cc.uk@perkinelmer.com
United Kingdom
P: 0800 896 046
F: 0800-89 17 14

PerkinElmer, Inc.
Llantrisant Business Park, Unit A
Llantrisant CF72 8YW
United Kingdom
cc.uk@perkinelmer.com
P: 44 1443 234005
· **1.4 Emergency telephone number:**
CHEMTREC (within US) 800-424-9300
CHEMTREC (from outside US) +1 703-527-3887 (call collect)
CHEMTREC (within AU) +(61)-290372994

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.


GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 Revision: 28.07.2021

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 1)

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS07, GHS08
· **Signal word** Warning

· **Hazard-determining components of labelling:**
dichloromethane
DNOC
2,4-dinitrophenol
pentachlorophenol
· **Hazard statements**
H302 Harmful if swallowed.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Additional information:**
Contains DNOC. May produce an allergic reaction.
· **2.3 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.

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SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 75-09-2 EINECS: 200-838-9	dichloromethane Carc. 2, H351 Acute Tox. 4, H302	97.2%
CAS: 51-28-5 EINECS: 200-087-7	2,4-dinitrophenol Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400	0.2%
CAS: 87-86-5 EINECS: 201-778-6	pentachlorophenol Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330 Carc. 2, H351 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.2%

(Contd. on page 3)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 2)

CAS: 88-06-2 EINECS: 201-795-9	2,4,6-trichlorophenol Carc. 2, H351 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	0.2%
CAS: 95-48-7 EINECS: 202-423-8	o-cresol Acute Tox. 3, H301; Acute Tox. 3, H311 Skin Corr. 1B, H314	0.2%
CAS: 95-95-4 EINECS: 202-467-8	2,4,5-trichlorophenol Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	0.2%
CAS: 105-67-9 EINECS: 203-321-6	2,4-xylenol Acute Tox. 3, H301; Acute Tox. 3, H311 Skin Corr. 1B, H314 Aquatic Chronic 2, H411	0.2%
CAS: 106-44-5 EINECS: 203-398-6	p-cresol Acute Tox. 3, H301; Acute Tox. 3, H311 Skin Corr. 1B, H314	0.2%
CAS: 108-95-2 EINECS: 203-632-7	phenol Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 Muta. 2, H341; STOT RE 2, H373 Skin Corr. 1B, H314	0.2%
CAS: 120-83-2 EINECS: 204-429-6	2,4-dichlorophenol Acute Tox. 3, H311 Skin Corr. 1B, H314 Aquatic Chronic 2, H411 Acute Tox. 4, H302	0.2%
CAS: 534-52-1 EINECS: 208-601-1	DNOC Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Muta. 2, H341 Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315; Skin Sens. 1, H317	0.2%

· **Additional Components**

CAS: 65-85-0 EINECS: 200-618-2	Benzoic acid STOT RE 1, H372 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315	0.2%
CAS: 88-75-5 EINECS: 201-857-5	2-nitrophenol Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	0.2%
CAS: 95-57-8 EINECS: 202-433-2	2-chlorophenol Aquatic Chronic 2, H411 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	0.2%
CAS: 100-02-7 EINECS: 202-811-7	4-nitrophenol STOT RE 2, H373 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	0.2%

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 3)

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

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SECTION 4: First aid measures

· **4.1 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:** *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.*
· **After swallowing:** *Call for a doctor immediately.*
· **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** *Use fire extinguishing methods suitable to surrounding conditions.*
· **5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*
· **5.3 Advice for firefighters**
· **Protective equipment:** *No special measures required.*

*

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** *Not required.*
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 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.
· **6.4 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.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Open and handle receptacle with care.
· **Information about fire - and explosion protection:** *Keep respiratory protective device available.*

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*

(Contd. on page 5)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 4)

· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:*** *Keep container tightly sealed.*
· ***7.3 Specific end use(s)*** *No further relevant information available.*

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SECTION 8: Exposure controls/personal protection

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

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
WEL	Short-term value: 706 mg/m³, 200 ppm Long-term value: 353 mg/m³, 100 ppm BMGV, Sk
108-95-2 phenol	
WEL	Short-term value: 16 mg/m³, 4 ppm Long-term value: 7.8 mg/m³, 2 ppm Sk

· **Ingredients with biological limit values:**	
75-09-2 dichloromethane	
BMGV	30 ppm Medium: end-tidal breath Sampling time: post shift Parameter: carbon monoxide

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

· ***8.2 Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· ***Respiratory protection:*** *Not required.*
· ***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 6)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 5)

· **Eye protection:** *Goggles recommended during refilling*

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical 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:	*-95.1 °C*
Initial boiling point and boiling range:	*40 °C*
· **Flash point:**	*Not applicable.*
· **Flammability (solid, gas):**	*Not applicable.*
· **Ignition temperature:**	*605 °C*
· **Decomposition temperature:**	*Not determined.*
· **Auto-ignition temperature:**	*Product is not selfigniting.*
· **Explosive properties:**	*Product does not present an explosion hazard.* *Not determined.*
· **Explosion limits:**	
Lower:	*13 Vol %*
Upper:	*22 Vol %*
· **Vapour pressure at 20 °C:**	*453 hPa*
· **Density at 20 °C:**	*1.0576 g/cm³*
· **Relative density**	*Not determined.*
· **Vapour density**	*Not determined.*
· **Evaporation rate**	*Not determined.*
· **Solubility in / Miscibility with**	
water at 20 °C:	*20 g/l*
· **Partition coefficient: n-octanol/water:**	*Not determined.*
· **Viscosity:**	
Dynamic:	*Not determined.*
Kinematic:	*Not determined.*
· **Solvent content:**	
Organic solvents:	*97.6 %*
Solids content:	*2.4 %*

(Contd. on page 7)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 6)

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

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

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**		
75-09-2 dichloromethane		
Oral	LD50	1600 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/l (rat)
87-86-5 pentachlorophenol		
Oral	LD50	27 mg/kg (rat)
Dermal	LD50	105 mg/kg (rat)
88-06-2 2,4,6-trichlorophenol		
Oral	LD50	820 mg/kg (rat)
534-52-1 DNOC		
Oral	LD50	10 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rabbit)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity**
Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 8)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 7)

· **Aspiration hazard** *Based on available data, the classification criteria are not met.*

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** *No further relevant information available.*
· **12.2 Persistence and degradability** *No further relevant information available.*
· **12.3 Bioaccumulative potential** *No further relevant information available.*
· **12.4 Mobility in soil** *No further relevant information available.*
· **Ecotoxical effects:**
· **Remark:** *Harmful to fish*
· **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.
Harmful to aquatic organisms
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*
· **12.6 Other adverse effects** *No further relevant information available.*

SECTION 13: Disposal considerations

· **13.1 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.*

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SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, ADN, IMDG, IATA**	*Void*
· **14.2 UN proper shipping name**	
· **ADR, ADN, IMDG, IATA**	*Void*
· **14.3 Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	*Void*
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	*Void*
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	*No*

(Contd. on page 9)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 8)

· **14.6 Special precautions for user**	*Not applicable.*
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	*Not applicable.*
· **UN "Model Regulation":**	*Non regulated according to above specifications.* *Void*

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

CAS: 75-09-2 EINECS: 200-838-9	dichloromethane Carc. 2, H351 Acute Tox. 4, H302	97.2%
CAS: 51-28-5 EINECS: 200-087-7	2,4-dinitrophenol Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400	0.2%
CAS: 65-85-0 EINECS: 200-618-2	Benzoic acid STOT RE 1, H372 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315	0.2%

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

87-86-5	pentachlorophenol	Annex I Part A

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 22, 59

· **Regulation (EU) No 649/2012**

87-86-5	pentachlorophenol	Annex I Part 1 Annex I Part 3
534-52-1	DNOC	Annex I Part 1 Annex I Part 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

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

(Contd. on page 10)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 9)

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SECTION 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**
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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
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.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:**
Environmental, Health and Safety
PerkinElmer
Chalfont Road
Buckinghamshire
Seer Green
HP9 2FX
United Kingdom
Telephone : 0800-89 60 46
FAX : 0800-89 17 14

· **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 11)

according to 1907/2006/EC, Article 31

Printing date 28.07.2021 *Revision: 28.07.2021*

Trade name: Mix- HICAL Acids Method 8270C

(Contd. of page 10)

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
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
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
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **** Data compared to the previous version altered.***