

Printing date 07/28/2021 Review date 07/28/2021

### 1 Identification

- · Product identifier
- · Trade name: FILTER-TRP OXY-MSTRE HYDROCARB ABSORB
- · Article number N9306819
- · 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

· 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



Health hazard

Carc. 1A H350 May cause cancer.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



### Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Eye Irrit. 2B H320 Causes eye irritation.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms GHS07, GHS08, GHS09
- · Signal word Danger
- · Hazard-determining components of labeling:

copper(II) oxide nickel monoxide manganese dioxide

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#### tricobalt tetraoxide

#### · Hazard statements

H302 Harmful if swallowed.

H320 Causes eye irritation.

H317 May cause an allergic skin reaction.

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

#### · Precautionary statements

*P201 Obtain special instructions before use.* 

P202 Do not handle until all safety precautions have been read and understood.

*P260* Do not breathe dust/fume/gas/mist/vapors/spray.

*P264* Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing must not be allowed out of the workplace.

*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.

*P302+P352 If on skin: Wash with plenty of water.* 

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

*P308+P313 IF exposed or concerned: Get medical advice/attention.* 

P321 Specific treatment (see on this label).

P314 Get medical advice/attention if you feel unwell.

*P333+P313* If skin irritation or rash occurs: Get medical advice/attention.

*P337+P313 If eye irritation persists: Get medical advice/attention.* 

*P363* Wash contaminated clothing before reuse.

P391 Collect spillage. P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

### · Classification system:

· NFPA ratings (scale 0 - 4)



Health = 1 Fire = 0Reactivity = 0

#### · HMIS-ratings (scale 0 - 4)



#### · 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.

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· vPvB: Not applicable.

Hazardous		
	components:	
1344-28-1	aluminium oxide	31.405%
7440-44-0	carbon 📀 Flam. Sol. 1, H228	25.0%
1318-02-1	Zeolites Eye Irrit. 2B, H320	18.8%
1317-38-0	copper(II) oxide � Aquatic Acute 1, H400; Aquatic Chronic 1, H410	7.0%
1313-13-9	manganese dioxide ••• Acute Tox. 4, H302; Acute Tox. 4, H332	6.44%
1308-06-1	tricobalt tetraoxide Carc. 1B, H350 Skin Sens. 1, H317	1.0%
1313-99-1	nickel monoxide Carc. 1A, H350; STOT RE 1, H372 Skin Sens. 1, H317 Aquatic Chronic 4, H413	1.0%

## 4 First-aid measures

· Description of first aid measures

7664-93-9 sulphuric acid

· 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 and to be sure call for a doctor.

*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. If symptoms persist, consult a doctor.

- · After swallowing: Immediately call a doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

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0.055%

Carc. 1A, H350
Skin Corr. 1A, H314



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· Indication of any immediate medical attention and special treatment needed No further relevant information available.

# 5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

## 6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Mount respiratory protective device.
- · Environmental precautions: No special measures required.
- · Methods and material for containment and cleaning up:

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.

Protective Action Criteria for Chemicals

PAC-1: 1344-28-1 aluminium oxide	$15 \text{ mg/m}^3$
1317-38-0 copper(II) oxide	$0.75 \text{ mg/m}^3$
1313-13-9 manganese dioxide	$4.7 \text{ mg/m}^3$
1308-06-1 tricobalt tetraoxide	0.082 mg/m
1313-99-1 nickel monoxide	$0.76 \text{ mg/m}^3$
7664-93-9 sulphuric acid	$0.20 \text{ mg/m}^3$
PAC-2:	·
1344-28-1 aluminium oxide	170 mg/m
1317-38-0 copper(II) oxide	11 mg/m³
1313-13-9 manganese dioxide	7.9 mg/m <sup>2</sup>
1308-06-1 tricobalt tetraoxide	4.5 mg/m <sup>2</sup>
1313-99-1 nickel monoxide	220 mg/m
7664-93-9 sulphuric acid	8.7 mg/m <sup>2</sup>
PAC-3:	
1344-28-1 aluminium oxide	$990 \text{ mg/m}^3$
1317-38-0 copper(II) oxide	93 mg/m³
1313-13-9 manganese dioxide	$690 \text{ mg/m}^3$
1308-06-1 tricobalt tetraoxide	27 mg/m³



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1313-99-1	nickel monoxide	$1,300 \text{ mg/m}^3$
7664-93-9	sulphuric acid	160 mg/m³

## 7 Handling and storage

- · Handling:
- · Precautions for safe handling

*Ensure good ventilation/exhaustion at the workplace.* 

Open and handle receptacle with care.

- · Information about protection against explosions and fires: Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

## 8 Exposure controls/personal protection

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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

1344	-28-1 aluminium oxide
PEL	Long-term value: 15*; 5** mg/m³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m³ as Al; *as respirable fraction
1313	-13-9 manganese dioxide
PEL	Ceiling limit value: 5 mg/m³ as Mn
REL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ as Mn
TLV	Long-term value: $0.02*0.1**mg/m^3$ as Mn; *respirable **inhalable fraction
1308	-06-1 tricobalt tetraoxide
PEL	Long-term value: 0.1* mg/m³ as Co; *for metal dust and fume

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REL Long-term value: 0.05 mg/m³
as Co; metal dust & fume
TLV Long-term value: 0.02\* mg/m³

TLV | Long-term value: 0.02\* mg/m³ as Co, \*inhalable; DSEN; RSEN; BEI

## 1313-99-1 nickel monoxide

PEL Long-term value: 1 mg/m³

as Ni

REL Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A
TLV Long-term value: 0.2 mg/m³

as Ni; inhalable fraction

## · Ingredients with biological limit values:

### 1308-06-1 tricobalt tetraoxide

BEI 15 μg/L

Medium: urine

Time: end of shift at end of workweek Parameter: Cobalt (background)

1 μg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Cobalt (background, semi-quantitative)

· Additional information: The lists that were valid during the creation 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 eyes.

Avoid contact with the eyes and skin.

### · Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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.

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· 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 or safety glasses

Information on basic physical and	chemical properties	
General Information		
Appearance: Form:	Solid material	
Color:	According to product specification	
Odor:	Light	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not determined.	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
<b>.</b>	Not determined.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density:	Not determined.	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
Partition coefficient (n-octanol/wat	er): Not determined.	
Viscosity:		

US.



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Kinematic:	Not applicable.	
· Solvent content: VOC content:	0.00 %	
Solids content:	71.8 %	
· 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:
- · on the skin: No irritant effect.
- on the eye: Irritating effect.
- · Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

*Irritant* 

· Carcinogenic categories

Carcinoge	and categories	
· IARC (Int	ernational Agency for Research on Cancer)	
1318-02-1	Zeolites	3
1308-06-1	tricobalt tetraoxide	2.6
1313-99-1	nickel monoxide	1
7664-93-9	sulphuric acid	1
· NTP (Nati	ional Toxicology Program)	
1313-99-1	nickel monoxide	K
7664-93-9	sulphuric acid	K
· OSHA-Ca	(Occupational Safety & Health Administration)	
None of th	e ingredients is listed.	



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## 12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Very toxic for fish
- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- · 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:

Dispose of container and materials in accordance with local, regional and national regulations.

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

· UN-Number	
$\cdot DOT$	Void
· ADR, IMDG, IATA	UN3077
· UN proper shipping name	
$\cdot DOT$	Void
· ADR	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANC
	SOLID, N.O.S.
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLI
	N.O.S., MARINE POLLUTANT
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLI
	N.O.S.

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· Transport hazard class(es)	
$\cdot$ DOT	
·Class	Void
· ADR	
<b>1 1 1 1 1 1 1 1 1 1</b>	
· Class	9 (M7) Miscellaneous dangerous substances and articles
· Label	9
· IMDG, IATA	
· Class	9 Miscellaneous dangerous substances and articles
	<u> </u>
· Packing group · DOT	Void
· ADR, IMDG, IATA	III
· Environmental hazards:  · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Product contains environmentally hazardous substances Activated copper oxide Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
<u> </u>	
<ul> <li>Special precautions for user</li> <li>Hazard identification number (Kemler code)</li> <li>EMS Number:</li> <li>Stowage Category</li> <li>Stowage Code</li> </ul>	Warning: Miscellaneous dangerous substances and articles ): 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· IMDG · Limited quantities (LQ)	5 kg

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· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN ''Model Regulation'':	Non regulated according to above specifications. UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

	alth and environmental regulations/legisla   aluminium oxide		31.40
7440-44-0	carbon	<b>◈</b> Flam. Sol. 1, H228	25.0
1318-02-1	Zeolites	Eye Irrit. 2B, H320	18.8
Sara			
Section 35	5 (extremely hazardous substances):		
7664-93-9	sulphuric acid		
Section 31	3 (Specific toxic chemical listings):		
1344-28-1	aluminium oxide		
1317-38-0	copper(II) oxide		
1313-13-9	manganese dioxide		
1308-06-1	tricobalt tetraoxide		
1313-99-1	nickel monoxide		
7664-93-9	sulphuric acid		
TSCA (To.	xic Substances Control Act):		
1344-28-1	aluminium oxide		ACT
1317-38-0	copper(II) oxide		ACT
	manganese dioxide		ACT
1308-06-1	tricobalt tetraoxide		ACT
1313-99-1	nickel monoxide		ACT
7664-93-9	sulphuric acid		ACT
Hazardous	s Air Pollutants		
1313-13-9	manganese dioxide		
1308-06-1	tricobalt tetraoxide		
1313-99-1	nickel monoxide		
Propositio			
	known to cause cancer:		
1313-99-1	nickel monoxide		



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(Contd. of page 11) · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed. · Chemicals known to cause developmental toxicity: None of the ingredients is listed. · Cancerogenity categories · EPA (Environmental Protection Agency) 1313-13-9 manganese dioxide DTLV (Threshold Limit Value established by ACGIH) 1344-28-1 aluminium oxide A41308-06-1 tricobalt tetraoxide A31313-99-1 nickel monoxide  $\overline{A1}$ 7664-93-9 sulphuric acid A2NIOSH-Ca (National Institute for Occupational Safety and Health) 1313-99-1 nickel monoxide

- · National regulations:
- · Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· 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.

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- · Water hazard class: Water hazard class 1 (Self-assessment): slightly 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 shall not be held liable for any damage resulting from handling or from contact with the product.

- · 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:

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

DOT: US Department of Transportation IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit

Flam. Sol. 1: Flammable solids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Skin Sens. 1: Skin sensitisation – Category 1 Carc. 1A: Carcinogenicity – Category 1A Carc. 1B: Carcinogenicity – Category 1B

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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 4: Hazardous to the aquatic environment - long-term aquatic hazard — Category 4

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

USA