

**1 Identification**

- **Product identifier**
- **Trade name:** OXYGEN TRAP, HIGH CAP FILTER
- **Article number** N9301179
- **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

- **Emergency telephone number:**  
CHEMTREC (within US) 800-424-9300  
CHEMTREC (from outside US) +1 703-527-3887 (call collect)

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



Flame

Self-heat. 1 H251 Self-heating: may catch fire.



Health hazard

Carc. 1A H350 May cause cancer.

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



Acute Tox. 4 H302 Harmful if swallowed.

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** GHS02, GHS07, GHS08
- **Signal word** Danger

- **Hazard-determining components of labeling:**

Activated copper oxide  
aluminium oxide  
Quartz (SiO2)

- **Hazard statements**

H251 Self-heating: may catch fire.  
H302 Harmful if swallowed.  
H320 Causes eye irritation.  
H350 May cause cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

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

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- P280 Wear protective gloves / eye protection / face protection.
- P235+P410 Keep cool. Protect from sunlight.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P420 Store away from other materials.
- P407 Maintain air gap between stacks/pallets.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **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.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components:**

7440-50-8	copper		36.0%
1314-13-2	zinc oxide - (non-pyrophoric)		24.0%
1318-02-1	Zeolites	Eye Irrit. 2B, H320	15.6%
1317-38-0	Activated copper oxide	Self-heat. 1, H251 Acute Tox. 3, H301	12.0%
1344-28-1	aluminium oxide	STOT RE 1, H372 STOT SE 3, H335	8.0%
1327-43-1	Aluminum Magnesium Silicate	Acute Tox. 3, H311 Acute Tox. 4, H332	2.2%
7782-42-5	Graphite		2.0%
14808-60-7	Quartz (SiO2)	Carc. 1A, H350	0.2%

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#### **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:** 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:** Immediately call a 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
- **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.

#### **7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Do not open
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.  
Do not expose contents to air.

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- **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.

### 7440-50-8 copper

PEL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV	Long-term value: 1* 0.2** mg/m <sup>3</sup> *dusts and mists; **fume; as Cu

### 1314-13-2 zinc oxide - (non-pyrophoric)

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction and fume
REL	Short-term value: 10** mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> Ceiling limit value: 15* mg/m <sup>3</sup> *dust only **fume
TLV	Short-term value: 10* mg/m <sup>3</sup> Long-term value: 2* mg/m <sup>3</sup> *as respirable fraction

### 1344-28-1 aluminium oxide

PEL	Long-term value: 15*; 5** mg/m <sup>3</sup> *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m <sup>3</sup> as Al; *as respirable fraction

### 7782-42-5 Graphite

PEL	Long-term value: 15 mppcf* mg/m <sup>3</sup> *impinger samples counted by light field techn.
REL	Long-term value: 2.5* mg/m <sup>3</sup> *respirable dust
TLV	Long-term value: 2* mg/m <sup>3</sup> all forms except graphite fibers; *resp. fraction

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**14808-60-7 Quartz (SiO<sub>2</sub>)**

PEL	see Quartz listing
REL	Long-term value: 0.05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m <sup>3</sup> *as respirable fraction

· **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.

· **Penetration time of glove material**

The exact break through 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

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Solid
Color:	White
Odor:	Characteristic
Odor threshold:	Not determined.

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· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	1975 °C (3587 °F)
<b>Boiling point/Boiling range:</b>	2230 °C (4046 °F)
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not determined.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Contents may become heated upon exposure to air.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C (68 °F):</b>	1.2 g/cm <sup>3</sup> (10.014 lbs/gal)
· <b>Bulk density at 20 °C (68 °F):</b>	ca.300-7 kg/m <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	95.4 %
· <b>Other information</b>	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.

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**11 Toxicological information**

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**1314-13-2 zinc oxide - (non-pyrophoric)**

Oral	LD50	> 5000 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

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

Harmful

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1318-02-1	Zeolites	3
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14808-60-7	Quartz (SiO2)	1
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· **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO2)	K
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**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.

· **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.

· **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.

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

**14 Transport information**

· <b>UN-Number</b> · <b>DOT, ADR, IMDG, IATA</b>	UN3190
· <b>UN proper shipping name</b> · <b>DOT, ADR</b> · <b>IMDG</b> · <b>IATA</b>	Self-heating solid, inorganic, n.o.s. (Activated copper oxide) SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide), MARINE POLLUTANT SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide)
· <b>Transport hazard class(es)</b> · <b>DOT</b>	
	
· <b>Class</b>	4.2 Substances liable to spontaneous combustion
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b>	4.2 Substances liable to spontaneous combustion
· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b>	Yes
· <b>Special precautions for user</b> · <b>Stowage Category</b>	Warning: Substances liable to spontaneous combustion E
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b> · <b>DOT</b> · <b>Quantity limitations</b>	On passenger aircraft/rail: 15 kg On cargo aircraft only: 50 kg
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· <b>UN "Model Regulation":</b>	UN 3190 SELF-HEATING SOLID, INORGANIC, N.O.S. (ACTIVATED COPPER OXIDE), 4.2, II

**15 Regulatory information**

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

7440-50-8	copper		36.0%
1314-13-2	zinc oxide - (non-pyrophoric)		24.0%
1318-02-1	Zeolites	Eye Irrit. 2B, H320	15.6%

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-50-8	copper
1314-13-2	zinc oxide - (non-pyrophoric)
1317-38-0	Activated copper oxide
1344-28-1	aluminium oxide

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

7440-50-8	copper
1314-13-2	zinc oxide - (non-pyrophoric)
1317-38-0	Activated copper oxide
1344-28-1	aluminium oxide
1327-43-1	Aluminum Magnesium Silicate
7782-42-5	Graphite
14808-60-7	Quartz (SiO2)

· **Proposition 65**

· **Chemicals known to cause cancer:**

14808-60-7	Quartz (SiO2)
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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **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.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

7440-50-8	copper	D
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1314-13-2	zinc oxide - (non-pyrophoric)	D, I, II
· <b>TLV (Threshold Limit Value established by ACGIH)</b>		
1344-28-1	aluminium oxide	A4
14808-60-7	Quartz (SiO <sub>2</sub> )	A2
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
14808-60-7	Quartz (SiO <sub>2</sub> )	

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS02, GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Activated copper oxide  
aluminium oxide  
Quartz (SiO<sub>2</sub>)
- **Hazard statements**  
H251 Self-heating: may catch fire.  
H302 Harmful if swallowed.  
H320 Causes eye irritation.  
H350 May cause cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.
- **Precautionary statements**  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P280 Wear protective gloves / eye protection / face protection.  
P235+P410 Keep cool. Protect from sunlight.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P420 Store away from other materials.  
P407 Maintain air gap between stacks/pallets.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **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 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**\* 16 Other information**

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**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.*

• **Contact:**

*With in the USA: 1-(800)-762-4000*

*Out side 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*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*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*

*Self-heat. 1: Self-heating substances and mixtures – Category 1*

*Acute Tox. 3: Acute toxicity – Category 3*

*Acute Tox. 4: Acute toxicity – Category 4*

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

*Carc. 1A: Carcinogenicity – Category 1A*

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

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

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