

# SAFETY DATA SHEET



Glass Indicating O2 Trap

## Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

**Product identifier** : Glass Indicating O2 Trap  
**Part No.** : 5182-9201, 5182-9202, 5182-9401, 5182-9402

### Relevant identified uses of the substance or mixture and uses advised against

Analytical chemistry.  
 Tube (Glass.)  
 1x100ml Tube  
 5182-9201 - Glass Indicating O2 Trap, 1/8"  
 5182-9202 - Glass Indicating O2 Trap, 1/8", SS  
 5182-9401 - Glass Indicating O2 Trap, 1/4"  
 5182-9402 - Glass Indicating O2 Trap, 1/4", SS

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

## Section 2. Hazard(s) identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

### Classification of the substance or mixture

H251	SELF-HEATING SUBSTANCES AND MIXTURES - Category 1
H302	ACUTE TOXICITY (oral) - Category 4
H332	ACUTE TOXICITY (inhalation) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
H350	CARCINOGENICITY - Category 1A
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (lungs) - Category 2
H401	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30%  
 Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: > 60%  
 Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%  
 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.5%

### GHS label elements

## Section 2. Hazard(s) identification

### Hazard pictograms



### Signal word

: DANGER

### Hazard statements

:  H251 - Self-heating: may catch fire.  
 H302 + H332 - Harmful if swallowed or if inhaled.  
 H318 - Causes serious eye damage.  
 H315 - Causes skin irritation.  
 H350 - May cause cancer.  
 H373 - May cause damage to organs through prolonged or repeated exposure.  
 (lungs)  
 H411 - Toxic to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

:  P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P281 - Use personal protective equipment as required.  
 P280 - Wear protective gloves. Wear eye or face protection.  
 P235 - Keep cool.  
 P410 - Protect from sunlight.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P273 - Avoid release to the environment.  
 P260 - Do not breathe dust.  
 P270 - Do not eat, drink or smoke when using this product.  
 P264 - Wash hands thoroughly after handling.

#### Response

:  P391 - Collect spillage.  
 P314 - Get medical attention if you feel unwell.  
 P308 + P313 - IF exposed or concerned: Get medical attention.  
 P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.  
 P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.  
 P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.  
 P332 + P313 - If skin irritation occurs: Get medical attention.  
 P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

#### Storage

: P405 - Store locked up.  
 P413 - Store bulk masses greater than 25 kg/55 lbs at temperatures not exceeding 50 °C/122 °F.  
 P407 - Maintain air gap between stacks.  
 P420 - Store away from other materials.

#### Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Supplemental label elements

#### Additional warning phrases

: Not applicable.

### Other hazards which do not result in classification

:  None known.

## Section 3. Composition and ingredient information

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

**Substance/mixture** : Mixture (encapsulated in article)

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Silicon dioxide	≥30 - ≤60	7631-86-9
Manganese dioxide	≥10 - ≤30	1313-13-9
Copper oxide, Activated	≥10 - ≤30	1317-38-0
aluminium oxide	≥10 - ≤30	1344-28-1
Talc , not containing asbestiform fibres	<10	14807-96-6
Calcium oxide	≤3	1305-78-8
Disodium oxide	≤3	1313-59-3
crystalline silica, respirable powder	≤3	14808-60-7
Zinc oxide	≤1	1314-13-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

## Section 4. First aid measures

**Eye contact** : Causes serious eye damage.

**Inhalation** : Harmful if inhaled.

**Skin contact** : Causes skin irritation.

**Ingestion** : Harmful if swallowed.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Self-heating material. May catch fire. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Hazchem code** : F+Y

**Remark** : May catch fire.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and material for containment and cleaning up

- Methods for cleaning up** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store bulk masses greater than 25 kg/55 lbs at temperatures not exceeding 50 °C/122 °F. Store locked up. Eliminate all ignition sources. Store away from other materials. Maintain air gap between stacks/pallets. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

### Control parameters

#### Occupational exposure limits

## Section 8. Exposure controls and personal protection

Ingredient name	Exposure limits
Silicon dioxide	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable dust and fumes
Manganese dioxide	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 1 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Dust
Copper oxide, Activated	<b>ACGIH TLV (United States).</b> TWA: 1 mg/m <sup>3</sup> , (Cu) 8 hours. Form: Total dust
aluminium oxide	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
Talc , not containing asbestiform fibres	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 2.5 mg/m <sup>3</sup> 8 hours.
Calcium oxide	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 2 mg/m <sup>3</sup> 8 hours.
crystalline silica, respirable powder	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: Respirable dust
Zinc oxide	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Dust STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume

**Appropriate engineering controls** : Use only with adequate ventilation. Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls and personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Solid.
- Colour** : Not available.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : May catch fire.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 0.8
- Density** : 0.8 g/cm<sup>3</sup> [20°C (68°F)]
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : 370°C (698°F)
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): Not applicable.

## Section 10. Stability and reactivity

- Reactivity** : This product, by reaction with air and without energy supply, is liable to self-heat and will ignite when in large amounts and after long periods of time. The spontaneous ignition temperature will be ≤ 50°C for a volume of 450 litres.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Hazardous reactions or instability may occur under certain conditions of storage or use.  
Conditions may include the following:  
extended contact with air in bulk storage  
Reactions may include the following:  
risk of causing fire  
spontaneous flammability
- Conditions to avoid** : No specific data.
- Incompatible materials** : May react or be incompatible with oxidising materials.

## Section 10. Stability and reactivity

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Manganese dioxide	LD50 Oral	Rat	3478 mg/kg	-
Copper oxide, Activated	LD50 Oral	Rat	470 mg/kg	-
aluminium oxide	LD50 Oral	Rat	>10000 mg/kg	-
Calcium oxide	LC50 Inhalation Dusts and mists	Rat - Male, Female	>6040 mg/m <sup>3</sup>	4 hours
Zinc oxide	LD50 Oral	Rat - Female	>2000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.7 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Silicon dioxide	Eyes - Mild irritant	Rabbit	-	24 hours 25 milligrams	-
Zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

#### Sensitisation

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Calcium oxide	Category 3	Not applicable.	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Calc, not containing asbestiform fibres crystalline silica, respirable powder	Category 1 Category 1	Not determined Not determined	lungs Not determined

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects



## Section 11. Toxicological information

- Eye contact** : Causes serious eye damage.  
**Inhalation** : Harmful if inhaled.  
**Skin contact** : Causes skin irritation.  
**Ingestion** : Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
 stomach pains

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.  
**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral Inhalation (dusts and mists)	1486.4 mg/kg 1.793 mg/l

## Section 12. Ecological information

### Toxicity

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Manganese dioxide	EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
Copper oxide, Activated	LC50 >100 mg/l	Fish - Oncorhynchus mykiss	96 hours
	NOEC >100 mg/l	Fish - Oncorhynchus mykiss	96 hours
aluminium oxide	Acute LC50 2.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 >56000 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
Calcium oxide	Acute EC50 114.357 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Chronic NOEC 100 mg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Zinc oxide	Acute LC50 ≥1070 mg/l Fresh water	Fish	46 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Zinc oxide	Acute IC50 1.85 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute IC50 46 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
Zinc oxide	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Zinc oxide	Chronic NOEC 0.058 mg/l Fresh water	Daphnia	21 days

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Silicon dioxide	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Calcium oxide	-	2.34	low
Zinc oxide	-	60960	high

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.





Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

	ADG	IMDG	IATA
<b>UN number</b>	UN3190	UN3190	UN3190
<b>UN proper shipping name</b>	SELF-HEATING SOLID, INORGANIC, N.O.S. (Copper oxide, Activated)	SELF-HEATING SOLID, INORGANIC, N.O.S. (Copper oxide, Activated)	Self-heating solid, inorganic, n. o.s. (Copper oxide, Activated)
<b>Transport hazard class(es)</b>	4.2 	4.2  	4.2 
<b>Packing group</b>	II	II	II
<b>Environmental hazards</b>	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

- ADG** : **Hazchem code** 1Y  
**Special provisions** 274
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-A, S-J  
**Special provisions** 274
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.  
**Quantity limitation** Passenger and Cargo Aircraft: 15 kg. Packaging instructions: 467. Cargo Aircraft Only: 50 kg. Packaging instructions: 470. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.  
**Special provisions** A3, A803

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

6, 5

### Model Work Health and Safety Regulations - Scheduled Substances

Ingredient name	Schedule
Quartz (respirable fraction)	Restricted hazardous chemical [For abrasive blasting at a concentration of greater than 1%]

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

## Section 15. Regulatory information

Not listed.

### [Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

## Section 16. Any other relevant information

### [History](#)

<b>Date of issue/Date of revision</b>	: 30/11/2017
<b>Date of previous issue</b>	: 15/02/2016.
<b>Version</b>	: 2

### [Key to abbreviations](#)

: ADG = Australian Dangerous Goods  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 NOHSC = National Occupational Health and Safety Commission  
 SUSMP = Standard Uniform Schedule of Medicine and Poisons  
 UN = United Nations

### [Procedure used to derive the classification](#)

**Section 16. Any other relevant information**

Classification	Justification
Self-heat. 1, H251 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 1A, H350 STOT RE 2, H373 (lungs) Aquatic Acute 2, H401 Aquatic Chronic 2, H411	Expert judgment Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

**Notice to reader**

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