Johnson Matthey

# SAFETY DATA SHEET

Rhodium (III) Chloride Crystal

**Product code :** 201000

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

### 1.1 Product identifier

| | | |
|---|---|---|
| **Product name** | : | Rhodium (III) Chloride Crystal |
| **EC number** | : | 233-165-4 |
| **CAS number** | : | 20765-98-4 |
| **Product code** | : | 201000 |
| **Product description** | : | Not available. |
| **Product type** | : | Solid. |
| **Other means of identification** | : | Rhodium trichloride |
| **Chemical formula** | : | Cl3-Rh |

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

Not applicable.

### 1.3 Details of the supplier of the safety data sheet

Johnson Matthey Plc,
Orchard Road,
Royston,
Herts SG8 5HE

**e-mail address of person responsible for this SDS** : EHS_CCR@matthey.com

### 1.4 Emergency telephone number

**Supplier**

| | | |
|---|---|---|
| **Telephone number** | : | +44(0)1763253000 |
| **Hours of operation** | : | 24 hours |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mono-constituent substance

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Met. Corr. 1, H290
Acute Tox. 4, H302
Eye Dam. 1, H318
Muta. 2, H341 (oral)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Classification according to Directive 67/548/EEC [DSD]**

Xn; R22, R68
Xi; R41

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

## SECTION 2: Hazards identification

### 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : May be corrosive to metals.
Harmful if swallowed.
Causes serious eye damage.
Suspected of causing genetic defects if swallowed.

**Precautionary statements**

**Prevention** : Obtain special instructions before use. Wear eye or face protection. Keep only in original container.

**Response** :

**Storage** : Store locked up.

**Disposal** : Not applicable.

**Hazardous ingredients** : Rhodium chloride (RhCl3), hydrate

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII** : Not applicable.

**Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : Not applicable.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

: Mono-constituent substance

| Product/ingredient name | Identifiers | % | Classification | | Type |
|---|---|---|---|---|---|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| Rhodium chloride (RhCl3), hydrate | EC: 233-165-4<br>CAS: 20765-98-4 | 99 - 100 | Xn; R22, R68<br>Xi; R41 | Met. Corr. 1, H290<br>Acute Tox. 4, H302<br>Eye Dam. 1, H318<br>Muta. 2, H341 (oral) | [A] |

## SECTION 3: Composition/information on ingredients

| | | | | | |
|---|---|---|---|---|---|
| | | | **See Section 16 for the full text of the R-phrases declared above.** | **See Section 16 for the full text of the H statements declared above.** | |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[A] Constituent
[B] Impurity
[C] Stabilising additive

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

## SECTION 4: First aid measures

### 4.1 Description of 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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.

**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.

### 4.2 Most important symptoms and effects, both acute and delayed

**Potential acute health effects**

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

**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

**Over-exposure signs/symptoms**

## SECTION 4: First aid measures

**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

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** :

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : No specific fire or explosion hazard.

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

### 5.3 Advice for firefighters

**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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**Remark** : The residue, ash or char left after a fire may have catalytic properties and may promote the re-ignition of flammable materials and vapours.

## SECTION 6: Accidental release measures

### 6.1 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 spilt 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".

**6.2 Environmental precautions** : Avoid dispersal of spilt 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).

## SECTION 6: Accidental release measures

### 6.3 Methods and materials for containment and cleaning up

**Small spill** : Move containers from spill area. Absorb spillage to prevent material damage. 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.

**Large spill** : Move containers from spill area. Absorb spillage to prevent material damage. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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. Absorb spillage to prevent material damage.

**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.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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 in corrosive resistant container with a resistant inner liner. Store locked up. 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.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker or exposure or environmental releases.

### 8.1 Control parameters

**Occupational exposure limits**

## SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|---|---|
| Rhodium chloride (RhCl3), hydrate | **EH40/2005 WELs (United Kingdom (UK), 12/2011).**<br>TWA: 0.001 mg/m³, (as Rh) 8 hours.<br>STEL: 0.003 mg/m³, (as Rh) 15 minutes. |

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

No DNELs/DMELs available.

**PNECs**

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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. 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.

**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** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## SECTION 8: Exposure controls/personal protection

**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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance**

| | | |
|---|---|---|
| **Physical state** | : | Solid. |
| **Colour** | : | Brownish-red. |
| **Odour** | : | Odourless. |
| **Odour threshold** | : | Not available. |
| **pH** | : | Not available. |
| **Melting point/freezing point** | : | Not available. |
| **Initial boiling point and boiling range** | : | 800°C |
| **Flash point** | : | Not applicable. |
| **Evaporation rate** | : | Not available. |
| **Flammability (solid, gas)** | : | Not available. |
| **Upper/lower flammability or explosive limits** | : | Not available. |
| **Vapour pressure** | : | Not applicable. |
| **Vapour density** | : | Not available. |
| **Relative density** | : | Not available. |
| **Solubility(ies)** | : | Easily soluble in the following materials: cold water and hot water. |
| **Partition coefficient: n-octanol/water** | : | Not available. |
| **Auto-ignition temperature** | : | Not available. |
| **Decomposition temperature** | : | Not available. |
| **Viscosity** | : | Dynamic (room temperature): Not applicable.<br>Kinematic (room temperature): Not applicable. |
| **Explosive properties** | : | Not available. |
| **Oxidising properties** | : | Not available. |
| Minimum ignition energy (mJ) | : | Not available. |

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The catalytic properties of this material may give it a low ignition temperature (except when supplied as a paste). The catalytic properties will also promote the oxidation and possible ignition of flammable liquids and vapours. A used, filtered catalyst should, therefore, be kept wet and out of contact with combustible vapours and liquids. The material is supplied in a stable condition and other than the previously mentioned catalytic hazards of this material, no specific reactive hazards are known.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

## SECTION 10: Stability and reactivity

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:
metals

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Rhodium chloride (RhCl3), hydrate | LD50 Oral | Rat | 753 mg/kg | - |

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

**Conclusion/Summary** : Not available.

**Sensitisation**

**Conclusion/Summary** : Not available.

**Mutagenicity**

| Product/ingredient name | Test | Experiment | Result |
|---|---|---|---|
| Rhodium chloride (RhCl3), hydrate | - | Subject: Bacteria | Positive |

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

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

Not available.

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

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

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

**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

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

## SECTION 11: Toxicological information

**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 and also 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.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : Suspected of causing genetic defects if swallowed.

**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.

**Other information** : Not available.

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

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

## SECTION 12: Ecological information

P: Not available. B: Not available. T: Not available.

**vPvB** : Not applicable.

vP: Not available. vB: Not available.

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

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Return accumulated waste material to the refinery for metal recovery, or dispose of in accordance with local and national regulations.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : 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

| | ADR/RID | ADN | IMDG | IATA |
|---|---|---|---|---|
| **14.1 UN number** | UN3260 | UN3260 | UN3260 | UN3260 |
| **14.2 UN proper shipping name** | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Rhodium chloride (RhCl3), hydrate) | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Rhodium chloride (RhCl3), hydrate) | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Rhodium chloride (RhCl3), hydrate) | Corrosive solid, acidic, inorganic, n.o.s. (Rhodium chloride (RhCl3), hydrate) |
| **14.3 Transport hazard class(es)** | 8  | 8  | 8  | 8  |
| **14.4 Packing group** | III | III | III | III |
| **14.5 Environmental hazards** | No. | No. | No. | No. |
| **Additional information** | **Hazard identification number**<br>80<br><br>**Limited quantity**<br>5 kg<br><br>**Special provisions**<br>274 | - | **Emergency schedules (EmS)**<br>F-A, S-B<br><br>**Special provisions**<br>223, 274 | **Passenger and Cargo Aircraft**<br>Quantity limitation: 25 kg<br>Packaging instructions: 860<br>**Cargo Aircraft Only**<br>Quantity limitation: 100 kg |

## SECTION 14: Transport information

| | | | | |
|---|---|---|---|---|
| | **Tunnel code**<br>(E) | | | Packaging instructions: 864<br>**Limited Quantities - Passenger Aircraft**<br>Quantity limitation: 5 kg<br>Packaging instructions: Y845<br><br>**Special provisions**<br>A3 |

**14.6 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.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Other EU regulations

**Europe inventory** : This material is listed or exempted.

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|---|---|---|---|---|
| Rhodium chloride (RhCl3), hydrate | - | Muta. 2, H341 (oral) | - | - |

#### Seveso II Directive

This product is not controlled under the Seveso II Directive.

#### International regulations

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

Not listed.

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

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

## SECTION 15: Regulatory information

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

**Australia** : This material is listed or exempted.

**Canada** : This material is listed or exempted.

**China** : This material is listed or exempted.

**Japan** : This material is listed or exempted.

**Malaysia** : Not determined.

**New Zealand** : This material is listed or exempted.

**Philippines** : This material is listed or exempted.

**Republic of Korea** : This material is listed or exempted.

**Taiwan** : Not determined.

**United States** : **United States inventory (TSCA 8b)**: This material is listed or exempted.

**15.2 Chemical Safety Assessment** : Not available.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|---|---|
| Met. Corr. 1, H290 | Expert judgment |
| Acute Tox. 4, H302 | Expert judgment |
| Eye Dam. 1, H318 | Expert judgment |
| Muta. 2, H341 (oral) | Expert judgment |

**Full text of abbreviated H statements** :

| | |
|---|---|
| H290 | May be corrosive to metals. |
| H302 (oral) | Harmful if swallowed. |
| H318 | Causes serious eye damage. |
| H341 (oral) | Suspected of causing genetic defects if swallowed. |

**Full text of classifications [CLP/GHS]** :

| | |
|---|---|
| Acute Tox. 4, H302 | ACUTE TOXICITY (oral) - Category 4 |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Met. Corr. 1, H290 | CORROSIVE TO METALS - Category 1 |
| Muta. 2, H341 (oral) | GERM CELL MUTAGENICITY (oral) - Category 2 |

**Full text of abbreviated R phrases** : R22- Harmful if swallowed.
R68- Possible risk of irreversible effects.
R41- Risk of serious damage to eyes.

**Full text of classifications [DSD/DPD]** : Xn - Harmful
Xi - Irritant

**Date of printing** : 06/03/2015.

**Date of issue/ Date of revision** : 06/03/2015.

# SECTION 16: Other information

**Date of previous issue** : No previous validation.

**Version** : 0.01

## Notice to reader

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