

# SAFETY DATA SHEET

1276F products



## Section 1. Identification

**GHS product identifier** : 1276F products  
**Other means of identification** : 1276F (036251)  
**Product type** : Powder.

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

Not applicable.

**Supplier's details** : Praxair Surface Technologies, Inc.  
1555 Main Street  
Indianapolis, IN 46224  
USA  
317-240-2650

**Emergency telephone number (with hours of operation)** : 317-240-2484 7:00am - 3:30pm ET Mon-Fri  
Chemtrec: 1-800-424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B  
CARCINOGENICITY - Category 2

### GHS label elements

#### Hazard pictograms

:



**Signal word** : Warning

**Hazard statements** : Causes eye irritation.  
Suspected of causing cancer.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear eye or face protection. Wash hands thoroughly after handling.

**Response** : IF exposed or concerned: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage** : Store locked up.

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

**Hazards not otherwise classified** : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance  
**Other means of identification** : 1276F (036251)

### CAS number/other identifiers

**CAS number** : Not available.  
**Product code** : 1276F products

Ingredient name	%	CAS number
1276F products	100	-
Nickel	50 - 75	7440-02-0
chromium	5 - 20	7440-47-3
tungsten	5 - 20	7440-33-7
silicon	1 - 5	7440-21-3
boron	1 - 5	7440-42-8
iron	1 - 5	7439-89-6
carbon	<1	7440-44-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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** : 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. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention. 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. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention. 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

- Eye contact** : Causes eye irritation.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

## Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting 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** : No specific fire or explosion hazard.

- 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.

## 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. Avoid breathing dust. 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).

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

- Small spill** : 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.
- Large spill** : Move containers from spill area. Approach 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. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 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 breathing dust. 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.
- 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 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 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Nickel	<p><b>ACGIH TLV (United States, 6/2013).</b> TWA: 1.5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 0.015 mg/m<sup>3</sup>, (as Ni) 10 hours.</p> <p><b>OSHA PEL (United States, 2/2013).</b> TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hours.</p>
chromium	<p><b>ACGIH TLV (United States, 6/2013).</b> TWA: 0.5 mg/m<sup>3</sup>, (measured as Cr) 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 0.5 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 2/2013).</b> TWA: 1 mg/m<sup>3</sup>, (as Cr) 8 hours.</p>
tungsten	<p><b>ACGIH TLV (United States, 6/2013).</b> TWA: 5 mg/m<sup>3</sup>, (as W) 8 hours. STEL: 10 mg/m<sup>3</sup>, (as W) 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b></p>

## Section 8. Exposure controls/personal protection

silicon	<p>TWA: 5 mg/m<sup>3</sup>, (as W) 10 hours.          STEL: 10 mg/m<sup>3</sup>, (as W) 15 minutes.  <b>OSHA PEL 1989 (United States, 3/1989).</b>          TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction          TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust  <b>NIOSH REL (United States, 10/2013).</b>          TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction          TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total  <b>OSHA PEL (United States, 2/2013).</b>          TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction          TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
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- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor 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.
- 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 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. If operating conditions cause high dust concentrations to be produced, use dust goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. 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 9. Physical and chemical properties

### Appearance

Physical state	: Solid. [Powder.]
Color	: Gray.
Odor	: Odorless.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: 987.78 to 1182.2°C (1810 to 2160°F)
Boiling point	: Not available.
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 9.87
Solubility	: Insoluble 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	: Not available.
VOC content	: 0 lbs/gal (0 g/l)

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
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
silicon	LD50 Oral	Rat	3160 mg/kg	-
boron	LD50 Oral	Rat	650 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
tungsten	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		
silicon	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams 3 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Nickel	-	2B	Reasonably anticipated to be a human carcinogen.
chromium	-	3	

### Reproductive toxicity

Not available.

### Teratogenicity

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** : Routes of entry anticipated: Dermal, Inhalation.

### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

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

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure



## Section 11. Toxicological information

### 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** : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Carcinogenicity** : Suspected of causing 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	3953.5 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Nickel	Acute EC50 2 ppm Marine water	Algae - <i>Macrocystis pyrifera</i> - Young	4 days
	Acute EC50 450 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>	4 days
	Acute EC50 1000 µg/l Marine water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute IC50 0.31 mg/l Marine water	Crustaceans - <i>Americamysis bahia</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 47.5 ng/L Fresh water	Fish - <i>Heteropneustes fossilis</i>	96 hours
	Chronic NOEC 100 mg/l Marine water	Algae - <i>Glenodinium halli</i>	72 hours
	Chronic NOEC 3.5 µg/l Fresh water	Fish - <i>Cyprinus carpio</i>	4 weeks
	Acute EC50 0.2 ppm Marine water	Algae - <i>Bacillariophyta</i>	72 hours
	Acute EC50 5 ppm Marine water	Algae - <i>Macrocystis pyrifera</i> - Young	4 days
	chromium	Acute EC50 35000 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>
Acute LC50 45 µg/l Fresh water		Crustaceans - <i>Ceriodaphnia reticulata</i>	48 hours
Acute LC50 22 µg/l Fresh water		Daphnia - <i>Daphnia magna</i>	48 hours
Acute LC50 13.9 ppm Fresh water		Fish - <i>Anguilla rostrata</i>	96 hours
Chronic NOEC 50 mg/l Marine water		Algae - <i>Glenodinium halli</i>	72 hours
Chronic NOEC 0.19 µg/l Fresh water		Fish - <i>Cyprinus carpio</i>	4 weeks
Acute EC50 60000 µg/l Fresh water		Aquatic plants - <i>Lemna minor</i>	4 days
Acute EC50 3700 µg/l Fresh water		Aquatic plants - <i>Lemna minor</i>	4 days
Acute LC50 33000 to 100000 µg/l Marine water		Crustaceans - <i>Crangon crangon</i>	48 hours
Acute LC50 6.48 µg/l Marine water		Fish - <i>Periophthalmus waltoni</i> - Adult	96 hours
boron			
iron			



## Section 12. Ecological information

Chronic NOEC 100 mg/l Marine water	Algae - Glenodinium halli	72 hours
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### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
silicon	57 to 77	-	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 minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	<u>Reportable quantity</u> 160 lbs / 72.64 kg Package sizes shipped in quantities less than the product reportable	-	-	-	-	-

## Section 14. Transport information

	quantity are not subject to the RQ (reportable quantity) transportation requirements.					
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**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 73/78 and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** tungsten  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
 All components are listed or exempted.  
**Clean Water Act (CWA) 307:** Nickel; chromium

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
 Delayed (chronic) health hazard

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
1276F products	100	No.	No.	No.	Yes.	Yes.
Nickel	50 - 75	No.	No.	No.	No.	Yes.
tungsten	5 - 20	No.	No.	No.	Yes.	No.
silicon	1 - 5	No.	No.	No.	Yes.	No.
boron	1 - 5	No.	No.	No.	Yes.	No.

### SARA 313

## Section 15. Regulatory information

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Nickel chromium	7440-02-0 7440-47-3	50 - 75 5 - 20
<b>Supplier notification</b>	Nickel chromium	7440-02-0 7440-47-3	50 - 75 5 - 20

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: NICKEL; TUNGSTEN; CHROMIUM; SILICON DUST
- New York** : The following components are listed: Nickel; Chromium
- New Jersey** : The following components are listed: NICKEL; TUNGSTEN; CHROMIUM; BORON; SILICON
- Pennsylvania** : The following components are listed: NICKEL; TUNGSTEN; CHROMIUM; SILICON
- California Prop. 65**

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Nickel	Yes.	No.	No.	No.

### 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.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : Not determined.
- Malaysia** : Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : Not determined.

## Section 16. Other information

### History

**Date of printing** : 6/3/2015.

**Date of issue/Date of revision** : 6/3/2015.

**Key to abbreviations** : 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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

**References** : Not available.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.