## SAFETY DATA SHEET



#### Diborane

### **Section 1. Identification**

**GHS** product identifier

: Diborane : diborane(6) : Diborane

**Chemical name** Other means of identification

: Synthetic/Analytical chemistry.

**Synonym** 

**Product use** 

: Diborane

SDS# 001071

: Airgas USA, LLC and its affiliates Supplier's details 259 North Radnor-Chester Road

Suite 100

Radnor, PA 19087-5283

1-610-687-5253

**Emergency telephone** number (with hours of operation)

: 1-866-734-3438

#### 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 : FLAMMABLE GASES - Category 1

GASES UNDER PRESSURE - Compressed gas

PYROPHORIC GASES

ACUTE TOXICITY (inhalation) - Category 1

**GHS** label elements

**Hazard pictograms** 







Signal word

Danger

**Hazard statements** 

: Extremely flammable gas.

May form explosive mixtures in Air.

Contains gas under pressure; may explode if heated.

Catches fire spontaneously if exposed to air.

Fatal if inhaled.

**Precautionary statements** 

General

: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use only with equipment purged with inert gas or evacuated prior to discharge from cylinder. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Approach suspected leak area with caution.

**Prevention** 

: Never Put cylinders into unventilated areas of passenger vehicles. Wear respiratory protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Do not breathe gas. Use and store only

outdoors or in a well ventilated place.

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### Section 2. Hazards identification

Response

: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

**Storage** 

: Store locked up. Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place. Decomposition Hazard: Store under Dry Ice.

**Disposal** 

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

Supplemental label elements

: Keep container tightly closed. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

**Hazards not otherwise** 

classified

: In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

## Section 3. Composition/information on ingredients

Substance/mixture: SubstanceChemical name: diborane(6)Other means of: Diborane

identification

#### **CAS** number/other identifiers

**CAS number** : 19287-45-7 **Product code** : 001071

Ingredient name	%	CAS number
diborane(6)	100	19287-45-7

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 if irritation occurs.

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. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: As this product is a gas, refer to the inhalation section.

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

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### Section 4. First aid measures

#### Potential acute health effects

**Eye contact**: Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation** : Fatal if inhaled.

Skin contact: Contact with rapidly expanding gas may cause burns or frostbite.Frostbite: Try to warm up the frozen tissues and seek medical attention.

**Ingestion**: As this product is a gas, refer to the inhalation section.

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

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. 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing

media

: Use dry chemical powder.

Unsuitable extinguishing

media

: Do not use water jet.

Specific hazards arising from the chemical

: Spontaneously flammable in air. Contains gas under pressure. Extremely flammable gas. May re-ignite itself after fire is extinguished. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products

: No specific data.

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. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

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.

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### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

## For non-emergency personnel

: Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe gas. 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**

Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Small spill** 

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. 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). Contains gas under pressure. Do not get in eyes or on skin or clothing. Do not breathe gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. This product should be handled using appropriate techniques that avoid exposure to atmospheric oxygen and moisture. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Use non-sparking tools. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

## 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 away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep under an inert atmosphere. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

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## Section 8. Exposure controls/personal protection

#### **Control parameters**

#### Occupational exposure limits

Ingredient name	Exposure limits
diborane(6)	ACGIH TLV (United States, 3/2012).  TWA: 0.11 mg/m³ 8 hours.  TWA: 0.1 ppm 8 hours.  NIOSH REL (United States, 1/2013).  TWA: 0.1 mg/m³ 10 hours.  TWA: 0.1 ppm 10 hours.  OSHA PEL (United States, 6/2010).  TWA: 0.1 mg/m³ 8 hours.  TWA: 0.1 ppm 8 hours.  OSHA PEL 1989 (United States, 3/1989).  TWA: 0.1 mg/m³ 8 hours.
	TWA: 0.1 fig/fil 8 flours.

## 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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive 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: safety glasses with sideshields.

#### 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. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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## Section 8. Exposure controls/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

: Use a properly fitted, air-purifying or air-fed 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 : Gas. [Compressed gas.]

Color : Colorless.

Molecular weight : 27.67 g/mole

Molecular formula : B2-H6

**Boiling/condensation point** : -92°C (-133.6°F) **Melting/freezing point** : -165°C (-265°F) **Critical temperature** : 16.7°C (62.1°F)

Odor : Characteristic.
Odor threshold : Not available.
pH : Not available.

Flash point : Closed cup: -90.15°C (-130.3°F)

**Burning time** Not applicable. **Burning rate** : Not applicable. Not available. **Evaporation rate** Flammability (solid, gas) : Not available. Lower and upper explosive : Lower: 0.8% (flammable) limits Upper: 88% Vapor pressure : 536 (psig) 0.96 (Air = 1)Vapor density

Specific Volume (ft 3/lb) :

octanol/water

Gas Density (lb/ft ³) : Not available.

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n- : Not available.

**Auto-ignition temperature** : 40 to 50°C (104 to 122°F)

Decomposition temperature: Not available.SADT: Not available.Viscosity: Not applicable.

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## 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

: Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions may include the following:

contact with air

Reactions may include the following:

spontaneous flammability

**Conditions to avoid** 

: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not

allow contact with air.

Incompatibility with various substances

Highly reactive or incompatible with the following materials: oxidizing materials and

moisture.

**Hazardous decomposition** 

products

: Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

**Hazardous polymerization** 

: Under normal conditions of storage and use, hazardous polymerization will not occur.

## **Section 11. Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
diborane(6)	LC50 Inhalation Gas.	Mouse	58 ppm	1 hours
, ,	LC50 Inhalation Gas.	Rat	80 ppm	1 hours
	LC50 Inhalation Gas.	Rat	40 ppm	4 hours
	LC50 Inhalation Vapor	Rat	60 mg/m³	4 hours

#### **Irritation/Corrosion**

Not available.

#### **Sensitization**

Not available.

#### **Mutagenicity**

Not available.

#### Carcinogenicity

Not available.

#### **Reproductive toxicity**

Not available.

#### **Teratogenicity**

Not available.

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

Not available.

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## Section 11. Toxicological information

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

Not available.

#### **Aspiration hazard**

Not available.

Information on the likely

: Not available.

routes of exposure

Potential acute health effects

**Eye contact** : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Fatal if inhaled.

**Skin contact** : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

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

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

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

**Short term exposure** 

Potential immediate : Not available.

effects

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

Not available.

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## **Section 12. Ecological information**

#### **Toxicity**

Not available.

#### Persistence and degradability

Not available.

#### **Bioaccumulative potential**

Not available.

**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. Empty Airgas-owned pressure vessels should be returned to Airgas. 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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## **Section 14. Transport information**

	DOT	TDG	Mexico	IMDG	IATA	
UN number	UN1911	UN1911	UN1911	UN1911	UN1911	
UN proper shipping name	DIBORANE, COMPRESSED		DIBORANE	DIBORANE	DIBORANE	
Transport hazard class(es)	2.3 (2.1)    NIMALATON   NIMAL	2.3 (2.1)	2.3 (2.1)	2.3 (2.1)	2.3 (2.1)	
Packing group	-	-	-	-	-	
Environment	No.	No.	No.	No.	No.	
Additional information	Inhalation hazard zone A  Limited quantity Yes.  Packaging instruction Passenger aircraft Quantity limitation: Forbidden.	Explosive Limit and Limited Quantity Index 0  ERAP Index 25  Passenger Carrying Ship Index Forbidden	-		Passenger and Cargo AircraftQuantity limitation: 0 Forbidden Cargo Aircraft Only Quantity limitation: 0 Forbidden	

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Diborane **Section 14. Transport information** Cargo aircraft Quantity limitation: Road or Rail Index Forbidden Forbidden **Special provisions** Special provisions

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) CDR Exempt/Partial exemption: Not determined

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

Clean Air Act (CAA) 112 regulated toxic substances: diborane(6)

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)**  : Not 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

			SARA 302 TPQ		SARA 304 RQ	
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
diborane(6)	100	Yes.	-	-	-	-

**SARA 304 RQ** : Not applicable.

**SARA 311/312** 

Classification : Fire hazard

Sudden release of pressure Immediate (acute) health hazard

**Composition/information on ingredients** 

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<sup>&</sup>quot;Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

## Section 15. Regulatory information

Name		hazard	Sudden release of pressure		(acute) health	Delayed (chronic) health hazard
diborane(6)	100	Yes.	Yes.	No.	Yes.	No.

**State regulations** 

**Massachusetts** : This material is listed. **New York** : This material is listed. **New Jersey** : This material is listed. **Pennsylvania** : This material is listed.

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

**International regulations** 

**International lists** : Australia inventory (AICS): Not determined.

China inventory (IECSC): This material is listed or exempted.

Japan inventory: This material is listed or exempted. Korea inventory: This material is listed or exempted. Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.

Philippines inventory (PICCS): This material is listed or exempted.

Taiwan inventory (CSNN): Not determined.

**Chemical Weapons** 

**Convention List Schedule** 

**I Chemicals** 

**Chemical Weapons Convention List Schedule** 

II Chemicals

**Chemical Weapons Convention List Schedule** 

**III Chemicals** 

: Not listed

: Not listed

: Not listed

#### **Canada**

WHMIS (Canada) : Class A: Compressed gas.

Class B-1: Flammable gas.

Class D-1A: Material causing immediate and serious toxic effects (Very toxic).

CEPA Toxic substances: This material is not listed.

Canadian ARET: This material is not listed. Canadian NPRI: This material is not listed.

Alberta Designated Substances: This material is not listed. Ontario Designated Substances: This material is not listed. Quebec Designated Substances: This material is not listed.

## Section 16. Other information

**Canada Label requirements** : Class A: Compressed gas.

Class B-1: Flammable gas.

Class D-1A: Material causing immediate and serious toxic effects (Very

toxic).

#### **Hazardous Material Information System (U.S.A.)**



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## Section 16. Other information

## Physical hazards

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### **History**

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**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 NationsACGIH - American Conference of Governmental Industrial

Hygienists

AIHA – American Industrial Hygiene Association

CAS – Chemical Abstract Services

CEPA – Canadian Environmental Protection Act

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

EPA)

CFR – United States Code of Federal Regulations

CPR – Controlled Products Regulations
DSL – Domestic Substances List

GWP – Global Warming Potential

IARC – International Agency for Research on Cancer ICAO – International Civil Aviation Organisation

Inh - Inhalation

LC - Lethal concentration

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## Section 16. Other information

LD – Lethal dosage

NDSL - Non-Domestic Substances List

NIOSH - National Institute for Occupational Safety and Health

TDG – Canadian Transportation of Dangerous Goods Act and Regulations

TLV - Threshold Limit Value

TSCA - Toxic Substances Control Act

WEEL - Workplace Environmental Exposure Level

WHMIS - Canadian Workplace Hazardous Material Information System

References : Not available.

▼ Indicates information that has changed from previously issued version.

#### **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.

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