# SAFETY DATA SHEET



Flammable Gas Mixture: Ethanol / Ethylene / Methanol / N-Propanol

# Section 1. Identification

GHS product identifier	: Flammable Gas Mixture: Ethanol / Ethylene / Methanol / N-Propanol
Other means of identification	: Not available.
Product use	: Synthetic/Analytical chemistry.
SDS #	: 012652
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Emergency telephone	: 1-866-734-3438

number (with hours of operation)

# 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 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3					
GHS label elements						
Hazard pictograms						
Signal word	: Danger					
Hazard statements	<ul> <li>Extremely flammable gas.</li> <li>Contains gas under pressure; may explode if heated.</li> <li>May displace oxygen and cause rapid suffocation.</li> <li>May cause drowsiness and dizziness.</li> </ul>					
Precautionary statements	<u>.</u>					
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 a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Approach suspected leak area with caution.					
Prevention	<ul> <li>Never Put cylinders into unventilated areas of passenger vehicles. Keep away from heat, sparks, open flames and hot surfaces No smoking. Use only outdoors or in a well-ventilated area. Avoid breathing gas. Use and store only outdoors or in a well ventilated place.</li> </ul>					
Response	<ul> <li>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. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.</li> </ul>					
Date of issue/Date of revision	: 1/28/2015. Date of previous issue : No previous validation. Version : 0.01 1/13					
1						

# Section 2. Hazards identification

Storage	<ul> <li>Store locked up. Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.</li> </ul>
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
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	: Mixture
Other means of	: Not available.
identification	

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

CAS number	: Not applicable.
Product code	: 012652

Ingredient name	%	CAS number
ethylene	97 - 99	74-85-1
ethanol	0.0001 - 1	64-17-5
methanol	0.0001 - 0.9999	67-56-1
propan-1-ol	0.0001 - 0.9999	71-23-8

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 necess	ary first aid measures
Eye contact	<ul> <li>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.</li> </ul>
Inhalation	: 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. Get medical attention. If necessary, call a poison center or physician. 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.

Potential acute health eff	icts	
Eye contact	: Contact with rapidly expanding gas may cause burns or frostbite.	
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.	
Skin contact	: Contact with rapidly expanding gas may cause burns or frostbite.	
Date of issue/Date of revision	: 1/28/2015. Date of previous issue : No previous validation. Version : 0.01	2/13

# Section 4. First aid measures

Frostbite	: Try to warm up the frozen tissues and seek medical attention.			
Ingestion	Can cause central nervous system (CNS) depression. As this product is a gas, refer to the inhalation section.			
Over-exposure signs/sym	<u>otoms</u>			
Eye contact	: No specific data.			
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness			
Skin contact	: No specific data.			
Ingestion	: No specific data.			
ndication of immediate me	dical attention and special treatment needed, if necessary			
Notes to physician	<ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</li> </ul>			
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 o 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

J	5
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	: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
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.

Date of issue/Date of revision :	1/28/2015.	Date of previous issue	: No previous validation.	Version	: 0.01	3/13
----------------------------------	------------	------------------------	---------------------------	---------	--------	------

# Section 6. Accidental release measures

Personal precautions, protec	ive 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. Avoid breathing 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 co	ntainment 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. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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. 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. 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).

# Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

Ingredient name		Exposure limits
ethylene		ACGIH TLV (United States, 3/2012). TWA: 200 ppm 8 hours.
Appropriate engineering controls	other engineering contro recommended or statuto	ventilation. Use process enclosures, local exhaust ventilation or ls to keep worker exposure to airborne contaminants below any ry limits. The engineering controls also need to keep gas, ions below any lower explosive limits. Use explosion-proof
Environmental exposure controls	they comply with the required cases, fume scrubbers, f	on or work process equipment should be checked to ensure uirements of environmental protection legislation. In some filters or engineering modifications to the process equipment ace emissions to acceptable levels.
Individual protection measu	res	
Hygiene measures	eating, smoking and usir Appropriate techniques s	Ind face thoroughly after handling chemical products, before ng the lavatory and at the end of the working period. should be used to remove potentially contaminated clothing. hing before reusing. Ensure that eyewash stations and safety workstation location.
Eye/face protection	assessment indicates thi gases or dusts. If contact	ng with an approved standard should be used when a risk is is necessary to avoid exposure to liquid splashes, mists, ct is possible, the following protection should be worn, unless is a higher degree of protection: safety glasses with side-
Skin protection		
Hand protection	worn at all times when ha necessary. Considering during use that the glove noted that the time to bre glove manufacturers. In	ervious gloves complying with an approved standard should be andling chemical products if a risk assessment indicates this is the parameters specified by the glove manufacturer, check is are still retaining their protective properties. It should be eakthrough for any glove material may be different for different the case of mixtures, consisting of several substances, the oves cannot be accurately estimated.
Body protection	performed and the risks handling this product. W static protective clothing.	pment for the body should be selected based on the task being involved and should be approved by a specialist before (hen there is a risk of ignition from static electricity, wear anti- For the greatest protection from static discharges, clothing overalls, boots and gloves.
Other skin protection	: Appropriate footwear and	d any additional skin protection measures should be selected performed and the risks involved and should be approved by a
Respiratory protection	standard if a risk assess	purifying or air-fed respirator complying with an approved ment indicates this is necessary. Respirator selection must be ipated exposure levels, the hazards of the product and the safe cted respirator.

# Section 9. Physical and chemical properties

Appearance		
Physical state	:	Gas.
Color	:	Not available.
Melting/freezing point	1	-169.15°C (-272.5°F) This is based on data for the following ingredient: ethylene.
Critical temperature	:	Lowest known value: 9.95°C (49.9°F) (ethylene).
Odor	:	Not available.
Odor threshold	1	Not available.
рН	4	Not available.
Flash point	1	Not available.
Burning time	1	Not applicable.
Burning rate	4	Not applicable.
Evaporation rate	1	Not available.
Flammability (solid, gas)	4	Not available.
Lower and upper explosive (flammable) limits	;	Not available.
Vapor pressure	1	Not available.
Vapor density	1	Highest known value: 0.98 (Air = 1) (ethylene).
Gas Density (lb/ft <sup>3</sup> )	1	Weighted average: 0.07
Relative density	1	Not applicable.
Solubility	1	Not available.
Solubility in water	4	Not available.
Partition coefficient: n- octanol/water	1	Not available.
Auto-ignition temperature	1	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Not applicable.
	_	

# 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	: 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.
Incompatibility with various substances	: Extremely reactive or incompatible with the following materials: oxidizing materials. Highly reactive or incompatible with the following materials: alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Date of issue/Date of revision	: 1/28/2015. Date of previous issue : No previous validation. Version : 0.01 6/13

# Section 10. Stability and reactivity

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

# Section 11. Toxicological information

### Information on toxicological effects

### Acute toxicity

Not available.

### Irritation/Corrosion

Not available.

### **Sensitization**

Not available.

### **Mutagenicity**

Not available.

### **Carcinogenicity**

Not available.

### **Classification**

Product/ingredient name	OSHA	IARC	NTP
ethylene	-	3	-

### **Reproductive toxicity**

Not available.

### **Teratogenicity**

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
ethylene	Category 3	Not applicable.	Narcotic effects

### 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	<ul> <li>Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.</li> </ul>
Skin contact	: Contact with rapidly expanding gas may cause burns or frostbite.
Ingestion	: Can cause central nervous system (CNS) depression. As this product is a gas, refer to the inhalation section.

Symptoms related to t	he physic	al, chemica	and	toxicological	characteristics
Eye contact	:	No specific	data.		

Date of issue/Date of revision	: 1/28/2015.	Date of previous issue	: No previous validation.	Version	:0.01	7/13

# Section 11. Toxicological information

Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: No specific data.
Ingestion	: No specific data.

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

<u>Short term exposure</u>	
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 effe	ects
Not available.	
General	: No known significant effects or critical hazards.
Carcinogenicity	: 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.

# Section 12. Ecological information

### **Toxicity**

Not available.

### Persistence and degradability

Not available.

### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
ethylene	1.13	-	low

### Mobility in soil

Date of issue/Date of revision         : 1/28/2015.         Date of previous issue         : No previous issue	evious validation. Version : 0.01 8/13
--	--

# Section 12. Ecological information

Soil/water partition coefficient (Koc)

: Not available.

# 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	ΙΑΤΑ
UN number	UN1954	UN1954	UN1954	UN1954	UN1954
UN proper shipping name	COMPRESSED GAS, FLAMMABLE, N.O.S. (ethylene, ethanol)	COMPRESSED GAS, FLAMMABLE, N.O.S. (ethylene, ethanol)	COMPRESSED GAS, FLAMMABLE, N.O.S. (ethylene, ethanol)	COMPRESSED GAS, FLAMMABLE, N.O.S. (ethylene, ethanol)	COMPRESSED GAS, FLAMMABLE, N.O.S. (ethylene, ethanol)
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	-	Explosive Limit and Limited Quantity Index 0.125 ERAP Index 3000 Passenger Carrying Ship Index Forbidden Passenger Carrying Road or Rail Index Forbidden	-	-	-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

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.

Date of issue/Date of revision : 1/28/	/2015. Date of previou	<b>is issue</b> : No previous va	alidation. Version : 0.01 9/13
--	------------------------	----------------------------------	--------------------------------

# Section 14. Transport information

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

# Section 15. Regulatory information

J.S. Federal regulations	:	TSCA 8	(a) CDR Exer	npt/Parti	al exemption	n: Not determi	ned	
		United \$	States invent	tory (TSC	A 8b): All cor	mponents are	listed or exemp	oted.
		Clean A	ir Act (CAA)	112 regu	lated flamma	able substand	<b>es</b> : ethylene	
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	:	Not liste	d					
Clean Air Act Section 602 Class I Substances	:	Not liste	d					
Clean Air Act Section 602 Class II Substances	:	Not liste	d					
DEA List I Chemicals (Precursor Chemicals)	:	Not liste	d					
DEA List II Chemicals (Essential Chemicals)	:	Not liste	d					
SARA 302/304								
Composition/information	on	<u>ingredie</u>	<u>nts</u>					
No products were found.								
SARA 304 RQ	:	Not app	icable.					
<u>SARA 311/312</u>								
Classification	:		ard release of pre ate (acute) he		rd			
Composition/information	on	<u>ingredie</u>	<u>nts</u>					
Name			%	Fire hazard	Sudden release of	Reactive	Immediate (acute)	Delayed (chronic)

Name	%	hazard	Sudden release of pressure		(acute) health	Delayed (chronic) health hazard	
ethylene	97 - 99	Yes.	Yes.	No.	Yes.	No.	

### SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	ethylene	74-85-1	97 - 99
Supplier notification	ethylene	74-85-1	97 - 99

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: ETHYLENE; ETHYL ALCOHOL New York : None of the components are listed. New Jersey : The following components are listed: ETHYLENE; ETHENE; ETHYL ALCOHOL; ALCOHOL Pennsylvania : The following components are listed: ETHYLENE; DENATURED ALCOHOL Date of issue/Date of revision : 1/28/2015. Date of previous issue : No previous validation. Version : 0.01

10/13

# Section 15. Regulatory information

### California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name		Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level	
methanol	No.	Yes.	No.	No.		
Canada inventory	: All comp	onents are lis	ted or exempted.			
International regulations						
International lists	China in Japan in Korea in Malaysia New Zea Philippir	ventory (IEC ventory: All o ventory: All o Inventory (I land Inventory nes inventory	SC): All component components are liste components are liste EHS Register): Not ory of Chemicals (N	ed or exempted. determined. <b>IZIOC)</b> : All components onents are listed or exe	I. are listed or exempted.	
Chemical Weapons Convention List Schedule I Chemicals	: Not listed	I				
Chemical Weapons Convention List Schedule II Chemicals	: Not listed	I				
Chemical Weapons Convention List Schedule III Chemicals	: Not listed					
<u>Canada</u>						
WHMIS (Canada)	Class B-1 Class D-2					
	Canadiar Canadiar Alberta D Ontario D	n ARET: None n NPRI: The for pesignated So Designated So	e of the components ollowing component <b>ubstances</b> : None o <b>ubstances</b> : None c	nponents are listed. s are listed. s are listed: Ethylene; E f the components are lis f the components are lis of the components are lis	sted.	

# Section 16. Other information

Canada Label requirements	1	1 0
		Class B-1: Flammable gas.
		Class D-2A: Material causing other toxic effects (Very toxic).
		Class D-2B: Material causing other toxic effects (Toxic).

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

Health		1	
Flammability		4	
Physical hazards			

Date of issue/Date	of revision
--------------------	-------------

:0.01

# Section 16. Other information

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.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

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.

### <u>History</u>

Date of issue/Date of revision

: 1/28/2015.

<u>Instory</u>	
Date of printing	: 1/28/2015.
Date of issue/Date of revision	: 1/28/2015.
Date of previous issue	: No previous validation.
Version	: 0.01
Key to abbreviations	<ul> <li>ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = 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 Agency for Research on Cancer ICAO – International Civil Aviation Organisation Inh – Inhalation LC – Lethal concentration LD – Lethal dosage NDSL – Non-Domestic Substances List NIOSH – National Institute for Occupational Safety and Health</li> </ul>

Date of previous issue

Version : 0.01

: No previous validation.

12/13

# Section 16. Other information

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.

13/13