# **SAFETY DATA SHEET**



Nonflammable Gas Mixture: M-Xylene / Nitrogen / O-Xylene / P-Xylene

### **Section 1. Identification**

**GHS** product identifier

: Nonflammable Gas Mixture: M-Xylene / Nitrogen / O-Xylene / P-Xylene

Other means of identification

: Not available.

**Product type** 

: Gas.

Product use

: Synthetic/Analytical chemistry.

SDS#

: 006205

Supplier's details

: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road

Suite 100

Radnor, PA 19087-5283

1-610-687-5253

24-hour telephone

: 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

: GASES UNDER PRESSURE - Compressed gas

**GHS** label elements

Hazard pictograms



Signal word

: Warning

**Hazard statements** 

Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

**Precautionary statements** 

General

**Prevention** 

: 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.

: Not applicable.

Response : Not applicable.

**Storage** : Protect from sunlight. Store in a well-ventilated place.

**Disposal** : Not applicable.

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 identification

: Not available.

Product code

: 006205

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# Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Nitrogen	99.1 - 99.9997	7727-37-9
p-xylene	0.0001 - 0.3	106-42-3
o-xylene	0.0001 - 0.3	95-47-6
m-xylene	0.0001 - 0.3	108-38-3

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 if irritation occurs.

**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 adverse health effects persist or are severe. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

surveillance for 48 hours.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and

shoes. 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

### Potential acute health effects

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

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

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** : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

**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)

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## 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

Hazardous thermal decomposition products

: Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

: Decomposition products may include the following materials: nitrogen 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. 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.

# 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. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized 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.

Large spill

: Immediately contact emergency personnel. Stop leak if without risk. 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 breathing gas. 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.

Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous.

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.

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## Section 7. Handling and storage

including any incompatibilities

Conditions for safe storage, : 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). 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). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits
Nitrogen	ACGIH TLV (United States, 3/2017). Oxygen
	Depletion [Asphyxiant].
p-xylene	NIOSH REL (United States, 10/2016).
	STEL: 655 mg/m³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 435 mg/m³ 10 hours.
	TWA: 100 ppm 10 hours.
	OSHA PEL (United States, 6/2016).
	TWA: 435 mg/m <sup>3</sup> 8 hours.
	TWA: 100 ppm 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	STEL: 655 mg/m³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 435 mg/m <sup>3</sup> 8 hours.
	TWA: 100 ppm 8 hours.
	ACGIH TLV (United States, 3/2017).
	TWA: 100 ppm 8 hours.
	TWA: 434 mg/m³ 8 hours.
	STEL: 150 ppm 15 minutes.
	STEL: 651 mg/m³ 15 minutes.
o-xylene	NIOSH REL (United States, 10/2016).
•	STEL: 655 mg/m³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 435 mg/m³ 10 hours.
	TWA: 100 ppm 10 hours.
	OSHA PEL (United States, 6/2016).
	TWA: 435 mg/m <sup>3</sup> 8 hours.
	TWA: 100 ppm 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	STEL: 655 mg/m³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 435 mg/m <sup>3</sup> 8 hours.
	TWA: 100 ppm 8 hours.
	ACGIH TLV (United States, 3/2017).
	TWA: 100 ppm 8 hours.
	TWA: 434 mg/m <sup>3</sup> 8 hours.
	STEL: 150 ppm 15 minutes.
	STEL: 651 mg/m³ 15 minutes.
m-xylene	NIOSH REL (United States, 10/2016).
III-Ayiolio	STEL: 655 mg/m³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 435 mg/m³ 10 hours.
	TWA: 433 flig/fli 10 flodis.
	OSHA PEL (United States, 6/2016).
	TWA: 435 mg/m <sup>3</sup> 8 hours.
	TWA: 433 flig/fil 6 flodis.
	OSHA PEL 1989 (United States, 3/1989).
	STEL: 655 mg/m³ 15 minutes.

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### Section 8. Exposure controls/personal protection

STEL: 150 ppm 15 minutes. TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

ACGIH TLV (United States, 3/2017).

TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes.

Appropriate engineering controls

**Environmental exposure** controls

- : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- : 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.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. 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.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

**Melting point** : -210.01°C (-346°F) This is based on data for the following ingredient: nitrogen.

**Boiling point** : Not available.

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### Section 9. Physical and chemical properties

Critical temperature : Lowest known value: -146.95°C (-232.5°F) (nitrogen).

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive : Not available.

(flammable) limits

Vapor pressure : Not available.

**Vapor density** : Highest known value: 0.97 (Air = 1) (nitrogen).

Gas Density (lb/ft 3) : Only known value: 0.072 (nitrogen).

Relative density : Not applicable.
Solubility : Not available.
Solubility in water : Not available.
Partition coefficient: n- : Not available.

octanol/water

Auto-ignition temperature: Not available.Decomposition temperature: Not available.Viscosity: Not applicable.Flow time (ISO 2431): Not available.

## 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.

**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
p-xylene	LC50 Inhalation Gas.	Rat	9100 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4550 ppm	4 hours
	LD50 Oral	Rat	3910 mg/kg	-
o-xylene	LC50 Inhalation Gas.	Mouse	8736 ppm	1 hours
	LC50 Inhalation Gas.	Rat	13400 ppm	1 hours
	LD50 Oral	Rat	3567 mg/kg	-
m-xylene	LD50 Oral	Rat	4988 mg/kg	-

**Irritation/Corrosion** 

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# **Section 11. Toxicological information**

Product/ingredient name	Result	Species	Score	Exposure	Observation
m-xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 10 Micrograms	-

#### **Sensitization**

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
p-xylene	-	3	-
o-xylene	-	3	-
m-xylene	-	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

: Not available.

#### Potential acute health effects

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

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

**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

: No specific data. **Eye contact** 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

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# **Section 11. Toxicological information**

Potential delayed effects : Not available.

**Long term exposure** 

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General
 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.
 No known significant effects or critical hazards.

#### **Numerical measures of toxicity**

**Acute toxicity estimates** 

Not available.

# **Section 12. Ecological information**

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
p-xylene	Acute EC50 3200 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 4730 μg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
o-xylene	Acute EC50 4700 μg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 10700 μg/l Fresh water	Crustaceans - Artemia sp Nauplii	48 hours
	Acute EC50 1390 μg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
m-xylene	Acute EC50 4900 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 5770 μg/l Fresh water	Crustaceans - Artemia sp Nauplii	48 hours
	Acute EC50 3530 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8400 μg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Not available.

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Nitrogen	0.67	-	low
p-xylene	3.15	8.1 to 25.9	low
o-xylene	3.12	8.1 to 25.9	low
m-xylene	3.2	8.1 to 25.9	low

## Section 12. Ecological information

**Mobility in soil** 

Soil/water partition coefficient (Koc)

: 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	UN1956	UN1956	UN1956	UN1956	UN1956
UN proper shipping name	COMPRESSED GAS, N.O.S. (nitrogen, m- xylene)				
Transport hazard class(es)	2.2	2.2	2.2	2.2	2.2
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

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

### **Additional information**

**DOT Classification** 

: Reportable quantity 33333.3 lbs / 15133.3 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**TDG Classification** 

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

**Explosive Limit and Limited Quantity Index** 0.125

Passenger Carrying Road or Rail Index 75

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.

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### Section 14. Transport information

Transport in bulk according : Not available.

to Annex II of MARPOL and

the IBC Code

# Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: p-xylene

TSCA 8(a) CDR Exempt/Partial exemption: Not determined Clean Water Act (CWA) 311: p-xylene; o-xylene; m-xylene

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** 

: Not listed

Class II Substances

DEA List I Chemicals
(Procureer Chemicals)

: Not listed

(Precursor Chemicals)

**DEA List II Chemicals** 

: Not listed

(Essential Chemicals)

#### **SARA 302/304**

#### **Composition/information on ingredients**

No products were found.

SARA 304 RQ : Not applicable.

**SARA 311/312** 

**Classification**: Refer to Section 2: Hazards Identification of this SDS for classification of substance.

**State regulations** 

Massachusetts : The following components are listed: NITROGEN; NITROGEN (LIQUIFIED)

New York : None of the components are listed.

New Jersey : The following components are listed: NITROGEN

Pennsylvania : The following components are listed: NITROGEN

**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 Informed Consent (PIC)**

Not listed.

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

Not listed.

#### **Inventory list**

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.

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### Section 15. Regulatory information

Japan inventory (ENCS): Not determined.

Japan inventory (ISHL): 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 : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are listed or exempted.

Viet Nam : Not determined.

### Section 16. Other information

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



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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

#### **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.

#### Procedure used to derive the classification

Classification	Justification	
GASES UNDER PRESSURE - Compressed gas	On basis of test data	

#### **History**

Date of printing : 9/30/2019

Date of issue/Date of : 9/30/2019

revision

Date of previous issue : No previous validation

Version : 1

Date of issue/Date of revision : 9/30/2019 Date of previous issue : No previous validation Version : 1 11/12

### **Section 16. Other information**

#### 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 = 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.

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