

Safety Data Sheet

**Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product identifier**

Product Name • **MODEL – 4640**
Product Code **MSDS No.: ME-3001-03645**

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

Relevant identified use(s) • Used in air separation processes

1.3 Details of the supplier of the safety data sheet

Manufacturer • Air Liquide
2700 Post Oak Blvd.
Houston, TX 77056
United States
www.us.airliquide.com
sds@airliquide.com

Telephone (Technical) • 713-896-2896

Telephone (Technical) • 800-819-1704

1.4 Emergency telephone number

Manufacturer • 800-424-9300 - CHEMTREC

Manufacturer • +1 703-527-3887 - Outside United States

Section 2: Hazards Identification**EU/EEC**

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Not classified

DSD/DPD • Not classified

2.2 Label Elements

CLP

Hazard statements • No label element(s) required

DSD/DPD

Risk phrases • No label element(s) required

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this preparation is not considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements ● No label element(s) required

2.3 Other hazards

OSHA HCS2012

- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Not classified

2.2 Label elements

WHMIS

- No label element(s) required

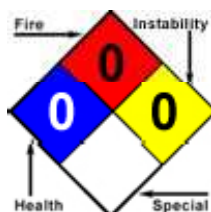
2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

NFPA



Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition				
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive
Fully reacted epoxy resins and curing agents	NDA	0% TO 100%	NDA	EUDSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking

Metal tubing	NDA	0% TO 100%	NDA	EUDSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking
Nylon filament	NDA	0% TO 100%	NDA	EUDSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking
Polymeric fiber	NDA	0% TO 100%	NDA	EUDSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking
Residual trace amounts of a carboxylic acid, an amine and silicone resin	NDA	0% TO 100%	NDA	EUDSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention.
- Eye**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention.
- Ingestion**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Under normal conditions of use, no health effects are expected.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- No specific actions or treatments recommended related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- Material is non-combustible. In case of fire use media as appropriate for surrounding fire.
- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

Hazardous Combustion

Products

5.3 Advice for firefighters

- Material is non-combustible and is not expected to pose a fire or explosion hazard.
 - No data available
 - Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
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Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- No special precautions expected to be necessary if material is used under ordinary conditions and as recommended.
- Emergency Procedures**
- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

- Handling**
- Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

- Storage**
- Store in a cool, dry place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

- Exposure Limits/Guidelines**
- Currently there are no applicable exposure limits established for this material.

8.2 Exposure controls

- Engineering Measures/Controls**
- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

- Respiratory**
- No respiratory protection is required under normal conditions and use.
- Eye/Face**
- No eye protection is required under normal conditions of use.
- Skin/Body**
- No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

- Environmental Exposure Controls**
- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Data lacking

Color	Data lacking	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not relevant.
Oxidizing Properties:	Not relevant.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not relevant.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- No data available.

10.5 Incompatible materials

- No data available.

10.6 Hazardous decomposition products

- No data available.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Skin

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Eye

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Ingestion

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • None

Canada

Labor

Canada - WHMIS - Classifications of Substances

Not Listed

Canada - WHMIS - Ingredient Disclosure List

Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

Not Listed

Germany

Environment**Germany - Water Classification (VwVwS) - Annex 1**

Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

Not Listed

Germany - Water Classification (VwVwS) - Annex 3

Not Listed

Other**Germany - Specifically Regulated Chemicals in TRGS**

Not Listed

Portugal

Other**Portugal - Prohibited Substances**

Not Listed

United Kingdom

Environment**United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air**

Not Listed

United Kingdom - Substances Contained in Dangerous Substances or Preparations

Not Listed

Other**United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review**

Not Listed

United Kingdom - The Red List - Dangerous Substances in Water

Not Listed

United States

Labor**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring

Not Listed

United States - California

Environment**U.S. - California - Proposition 65 - Carcinogens List**

Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Last Revision Date**

- 03/February/2015

Preparation Date

- 09/September/2014

Disclaimer/Statement of Liability

- To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

Key to abbreviations

NDA = No Data Available