

# **Stone Wool Insulation**

Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200 Revision date : February 2nd, 2018 Supersedes : February 5th, 2015

Version: 1

# SECTION 1: Identification of the substance/mixture and of the company/undertaking **Product identifier** 1.1. Product form : Fibrous batt, blanket, or board. Name Stone Wool Insulation : AFB<sup>®</sup>, CAVITYROCK<sup>®</sup>, COMFORTBATT<sup>®</sup>, COMFORTBOARD<sup>™</sup>, CURTAINROCK<sup>®</sup>, ROXUL Product code SAFE™ 55 & 65, ROCKBOARD®, ROXUL PLUS® MB, ROXUL SAFE™, SAFE'n'SOUND®, ROXUL SAFE™ 45, MONOBOARD<sup>®</sup>, TOPROCK<sup>®</sup> 1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2.1. Relevant identified uses Use of the substance/preparation : Commercial, industrial, and residential insulation Uses advised against 1.2.2. None known. Details of the supplier of the safety data sheet 1.3. ROXUL Inc. 8024 Esquesing Line Milton, Ontario, Canada L9T 6W3 www.rockwool.com Telephone: 1-800-265-6878 or +1-905-878-8474 Fax: +1-905-878-8077 1.4. **Emergency telephone number** Telephone: 1-800-265-6878 or 1-905-878-8474 (9:00 am to 5:00 pm ET) **SECTION 2: Hazards identification** Classification of the substance or mixture 2.1. WHMIS Classification Not controlled Classification according to 2012 29 CFR § 1910.1200 [OSHA GHS] Not classified Classification according to NMX-R-019-SCFI-2011 [Mexico GHS] Not classified Adverse physicochemical, human health and environmental effects This product may cause mechanical irritation to the eyes and skin. Temporary irritation of the upper respiratory tract (scratchy throat, coughing, congestion) may result from exposure to dusts and fibers in excess of applicable exposure limits. Pre-existing chronic eye, skin and respiratory conditions may temporarily worsen due to exposure to dusts and fibers. This product may cause allergy in sensitized individuals. There is insufficient evidence that synthetic mineral fibers cause respiratory disease in humans. Results from animal experiments have led to conservative classifications of certain synthetic mineral fibers as possible human carcinogens. Specifically, glass wool insulation is not classifiable as to their carcinogenicity to humans. 2.2. Label elements

: None
1910.1200 [OSHA GHS]
: None
: None
: None
: None

# Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

Labelling according to NMX-R-019-SCFI-2011	[Mexico GHS]
Hazard pictograms (Mexico GHS)	: None
Signal word (Mexico GHS)	: None
Hazard statements (Mexico GHS)	: None
Precautionary statements (Mexico GHS)	: None

2.3. Any hazards not otherwise classified

None known.

# **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable.

## 3.2. Mixtures

Name	Product Identifier (CASRN)	Weight %
Mineral wool fiber	65997-17-3	94-99%
Phenol formaldehyde polymer	9003-35-4	<6%

# SECTION 4: First aid measures

4.1. Des	cription of first aid measures		
First-aid meas	ures after inhalation	:	If irritation occurs, remove the affected person to fresh air. Drink water, and blow nose, to clear dusts and fibers from throat and nose. If irritation persists, consult a physician.
First-aid meas	ures after skin contact	:	Rinse thoroughly under running water prior to washing with mild soap and water. Use a washcloth to help remove fibers. If irritation occurs, do not rub or scratch. If irritation persists, consult a physician.
First-aid meas	ures after eye contact	:	If irritation occurs, hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Do not rub the eyes. Consult a physician if irritation persists.
First-aid meas	ures after ingestion	:	Ingestion of this product is unlikely and not intended under normal conditions of use. DO NOT INDUCE VOMITING. Wash out mouth with water. Consult a physician if symptoms persist.
4.2. Mos	at important symptoms and effect	s,	both acute and delayed
Symptoms/inj	uries after inhalation	:	Temporary mechanical irritation of the upper respiratory tract (scratchy throat, coughing, congestion) may result from exposure to dusts and fibers in excess of applicable exposure limits. Pre-existing chronic eye, skin and respiratory conditions may temporarily worsen due to exposure to dusts and fibers.
Symptoms/inj	uries after skin contact	:	Dusts and fibers may cause irritation (itching) or redness to the skin. Pre-existing chronic eye, skin and respiratory conditions may temporarily worsen due to exposure to dusts and fibers.
Symptoms/inj	uries after eye contact	:	Dusts and fibers may cause irritation (itching) or redness to the eyes. Pre-existing chronic eye, skin and respiratory conditions may temporarily worsen due to exposure to dusts and fibers.
Symptoms/inj	uries after ingestion	:	Ingestion of this product is unlikely and not intended under normal conditions of use. Ingestion of this product may cause gastrointestinal irritation.

# 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECT	SECTION 5: Firefighting measures		
5.1.	Extinguishing media		
Suitable	e extinguishing media:	: Water, foam, carbon dioxide, or dry powder	
Unsuita	ble extinguishing media	: None known.	
5.2.	Special hazards arising from the	substance or mixture	
Fire ha	zard	: This product is non-combustible and does not pose a fire hazard. However, packaging material may burn.	
Reactiv	vity	: When mineral wool is heated above approximately 200°C (~392°F), binder components and decomposition gases are emitted from the binder, which can be detected by odor.	
5.3.	Advice for firefighters		
Protect	ive equipment for firefighters	: Do not enter fire are without proper protective equipment, including NIOSH-approved self- contained breathing apparatus (SCBA). Observe normal fire fighting procedures.	

# Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

SECTION 6: Accidental release measures			
6.1.	Personal precautions, protective equipment and emergency procedures		
6.1.1.	6.1.1. For non-emergency personnel		
Pick up I Sheet).	arge pieces and scoop up dusts and fibe	ers after they have settled out of air. Wear protective equipment (see Section 8 of this Safety Data	
6.1.2.	For emergency responders		
Protectiv	re equipment	: Ensure clean-up personnel wear appropriate personal protective equipment (see Section 8 of this Safety Data Sheet).	
Emerger	ncy procedures	: Isolate area. Evacuate non-essential personnel. Avoid inhalation of dusts. Avoid creating dust on clean-up of material. Responders and clean-up crews must be properly trained and must utilize appropriate personal protective equipments (see Section 8 of this Safety Data Sheet). If dry methods or compressed air are used to collect dust and fibers, all personnel in the area should wear OSHA-approved protective equipment (see Section 8 of this Safety Data Sheet).	
6.2.	Environmental precautions		
		nless system is designed and permitted to handle such material. These materials will disperse and It cannot easily be removed once it is waterborne, but is considered non-hazardous in water.	
6.3.	Methods and material for containme	ent and cleaning up	
For cont	ainment	: This material will settle out of air. If concentrated on land, it can be scooped up for disposal as non-hazardous waste.	
Methods	for cleaning up	: Use OSHA-recommended work practices and protective equipment as described in Section 8 of this Safety Data Sheet. Avoid generating airborne dusts and fibers during cleanup. Do not use compressed air. Vacuum dusts and fibers. Place material in an appropriate container for disposal as non-hazardous waste.	
6.4.	Reference to other sections		
See Sec	tion 8 for personal protective equipment.	. See Section 13 for disposal considerations.	
SECTI	ON 7: Handling and storage		
7.1.	Precautions for safe handling		
Precauti	ons for safe handling	: Utilize OSHA-recommended work practices and protective equipment when fabricating, installing or removing the products (see Section 8 of this Safety Data Sheet). Unpack material at applicable site to avoid unnecessary handling of product. Keep work area clean. Avoid unnecessary handling of scrap material and debris by placing such materials in suitable containers, which should be kept as close to the work area as possible. Avoid generating dusts. Avoid excessive eye and skin contact with dusts and fibers. Use recommended cleanup procedures to avoid buildup of dusts and fibers in the work area.	
Hygiene	measures	: Handle in accordance with good industrial hygiene and safety practice. Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Remove fibers from the work clothes, before leaving work to reduce potential skin irritation. If working in a very dusty environment, it is advisable to shower and change clothes.	
7.2.	Conditions for safe storage, including	ng any incompatibilities	
Technica	al measures:	: Ensure adequate ventilation.	
Storage	condition(s)	: Keep material in original packaging until it is to be used. Store material to protect against adverse conditions including precipitation.	
Incompa	tible materials	: Hydrofluoric acid.	
7.3.	Specific end use(s)		
Commer	cial industrial residential and marine in	sulation	

Commercial, industrial, residential, and marine insulation.

### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

Follow all applicable exposure limits. Local regulations may apply. ROCKWOOL<sup>™</sup> recommends that users of the products adhere to the OSHArecommended PEL of 1 f/cc TWA (fibers longer than 5 µm with diameters less than 3µm). This recommended PEL, together with recommended work practices and personal protective equipment, were adopted in a Health and Safety Partnership Program (HSPP) agreement in 1999 between OSHA and the North American Insulation Manufacturers Association (NAIMA), of which ROCKWOOL<sup>™</sup> is a member. Adherence to the OSHArecommended PEL, work practices and protective equipment in the HSPP is expected to provide appropriate protection against all inhalationrelated health risks that may be associated with exposures to mineral wool fibers (ACGIH, 1997; NAIMA, 1999; OSHA, 1999; National Research Council, 2000; IARC, 2001), and to minimize eye and skin irritation.

Reference	Exposure	Legal or Recommended Exposure Limit
OSHA	Synthetic Vitreous Fibers, >5 µm length, <3 µm diameter	1 f/cc TWA (recommended)
	Inert dust and particulates not otherwise regulated	15 mg/m <sup>3</sup> TWA-PEL (total particulate) 5 mg/m <sup>3</sup> TWA-PEL (respirable particulate)

Safety Data Sheet according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

Reference	Exposure	Legal or Recommended Exposure Limit	
ACGIH	Synthetic Vitreous Fibers, >5 µm lengt diameter	h, <3 μm 1 f/cc TWA (threshold limit value- TLV)	
	Particulates not otherwise classified, on asbestos and <1% crystalline silication of the silication of	ontaining 10 mg/m <sup>3</sup> TWA-TLV (inhalable particulate) 3 mg/m <sup>3</sup> TWA-TLV (respirable particulate)	
8.2. Exposure controls			
Appropriate engineering controls	should be used as ne collection systems sh using power tools. Lo levels which exceed a cleaning purposes sh In poorly ventilated au	on. Where feasible, general dilution ventilation or local exhaust ventilation cessary to maintain exposures below applicable exposure limits. Dust ould be used in cutting or machining operations and may be needed when ocal exhaust ventilation may be required if the method of use produces dust applicable exposure limits. A washing facility/water for eye and skin ould be present. eas when dusty conditions exist and/or dust levels exceed applicable a NIOSH certified dust respirator with an efficiency rating of N95 or higher,	
Personal protective equipment		s or goggles, protective clothing, respirator	
Hand protection	: Gloves, salety glasse	s or goggies, protective clothing, respirator	
Eye protection		ety goggles with side shields.	
Skin and Body protection			
Respiratory protection	<ul> <li>In poorly ventilated at exposure limits, wear Use disposable face 8210 (or 8710) (3M M to five times the estat and for exposures up (e.g., MSA's DM-11, 50 times the establish</li> </ul>	<ul> <li>Appropriate protective clothing. Do not tape sleeves or pants at wrists or ankles.</li> <li>In poorly ventilated areas when dusty conditions exists and/or dust levels exceed applicable exposure limits, wear a NIOSH certified dust respirator with an efficiency rating of N95 or higher. Use disposable face masks complying with NIOSH respirator standards, such as a 3M Model 8210 (or 8710) (3M Model 9900 in high humidity environments) or equivalent. For exposures up to five times the established exposure limits use a quarter-mask respirator, rated N95 or higher; and for exposures up to ten times the established exposure limits, use a half-mask respirator (e.g., MSA's DM-11, Racal's Delta N95, 3M's 8210), rated N95 or higher. For exposures up to 50 times the established exposure limits, use a full-faced respirator, rated N99 or higher.</li> </ul>	
Environmental exposure controls	: Avoid release to the e	environment.	
<b>SECTION 9: Physical and</b>	chemical properties		
-	ohysical and chemical properties		
Physical state	: Solid		
Color	: Grey, green, brown		
Odor	: May have slight resin	odor	
Odor threshold	: Not applicable		
рН	: Not applicable		
Melting point	: Approximately 2150°	= (1177°C)	
Solidification point	: Data not available		
Boiling point	: Not applicable		
Flash point	: None		
Relative evaporation rate (butylac			
Flammability (solid, gas)	: Not applicable		
Explosive limits	: Not applicable		
Vapour pressure	: Not applicable		
Relative vapour density at 20 °C	: Not applicable		
Relative density	: Not applicable		
Solubility	: Insoluble in water		
Log Pow Log Kow	: Not applicable		
Self ignition temperature	: Not applicable : Not applicable		
Decomposition temperature	: Not applicable		
Viscosity, kinematic	: Not applicable		
Viscosity, dynamic	: Not applicable		
Explosive properties	: Not applicable		
Oxidising properties	: Not applicable		
VOC Content less than	Not applicable		
9.2. Other information			
Upper flammable Limit	: Not applicable		
Lower Flammable Limit	: Not applicable		
Sensitivity to mechanical impact	: No data available		
Sensitivity to static discharge	: No data available		

Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

This product is stable under the normal conditions of use.

#### 10.2. Chemical stability

This product is stable under the normal conditions of use.

#### 10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous polymerization is not known to occur.

#### 10.4. Conditions to avoid

Avoid generation of dust.

### 10.5. Incompatible materials

This product reacts with hydrofluoric acid.

#### 10.6. Hazardous decomposition products

Primary combustion products of the cured urea extended phenolic formaldehyde binder, when heated above 390°F (200°C), are carbon monoxide, carbon dioxide, ammonia, water and trace amounts of formaldehyde. Other undetermined compounds could be released in trace quantities. Emission usually only occurs during the first heating. The released gases may be irritating to the eyes, nose and throat during initial heat-up. Use appropriate respirators (air supplied) particularly in tightly confined or poorly ventilated areas during initial heat-up.

#### **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects Routes of Entry : Oral, dermal, inhalation, eye contact.

Acute toxicity

: No product data available.

#### Ingredient data:

Name	Product Identifier (CASRN)	Route & Species	Value (LD <sub>50</sub> /LC <sub>50</sub> )
Mineral wool fiber	65997-17-3	No data identified	No data identified
Phenol formaldehyde polymer	9003-35-4	Oral, rat	>5000 mg/kg
		Dermal, rat	>2000 mg/kg

Skin corrosion/irritation	Coarse fibers and dust from mineral wool products can cause irritation (itching, redness) of the skin. The itching and possible inflammation are a mechanical reaction to dust and coarse fibers (or more than about 5 μm in diameter) and are not damaging in the way chemical irritants may be. The symptoms generally abate within a short time after the end of exposure. When products are handled continually, the skin itching generally diminishes.
Serious eye damage/irritation	: Coarse fibers and dust from mineral wool products can cause irritation (itching, redness) of the eyes. The itching and possible inflammation are a mechanical reaction to dust and coarse fibers (or more than about 5 µm in diameter) and are not damaging in the way chemical irritants may be. The symptoms generally abate within a short time after the end of exposure.
Respiratory or skin sensitisation	: This product contains a component (phenol formaldehyde polymer) at ≥1% that may cause allergy in sensitized individuals.
Germ cell mutagenicity	: This product is not known to contain any components at ≥0.1% that has been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the

components, this product is not expected to be a mutagen.

Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

Carcinogenicity

: In October 2001, IARC completed a re-evaluation of respirable mineral wool fibers and classified them in Group 3 (not classifiable as to their carcinogenicity to humans). A summary of the most important scientific studies appears below:

#### Human data:

The possible carcinogenic effects of exposure to mineral wool fibers have been evaluated in a number of epidemiological (human) studies. Most of the research, including large long-term studies of mineral wool production workers in the U.S. and Europe, has been sponsored or supported by the North American and International thermal insulation industries, including ROXUL Inc. Published reports of the early results of these studies identified significantly elevated rates of respiratory cancer in several subcohorts of the worker populations under evaluation (e.g., Simonato et al., 1987; Enter line et al., 1987). However, the studies had several methodological limitations, including failure to control for confounding exposures to other possible causes of the elevated cancer risk, including tobacco use and occupational exposures to recognized carcinogens such as asbestos. For these reasons, the authors of these reports did not interpret the results as establishing an association between exposure to mineral wool fibers and an increased risk of cancer. Several of these earlier reports formed part of the basis for IARC's previous classification of mineral wool fibers in Group 2B (possibly carcinogenic to humans) (IARC, 1987).

Follow-up studies, including case-control studies designed to exclude the contribution of confounding exposures to the cancer experience of the study populations, found no evidence that mineral wool fibers are associated with an increased cancer risk (Marsh et al., 1996; Wong et al., 1991; Kjaerheim et al., 2001). In announcing the new Group 3 classification for mineral wool fibers, IARC stated: "Epidemiologic studies published during the 15 years since the previous IARC Monographs review of these fibers in 1988 provide no evidence of increased risks of lung cancer or of mesothelioma (cancer of the lining of the body cavities) from occupational exposures during manufacture of these materials" (IARC, 2001).

### Animal data:

Several studies of intraperitoneal injection of high doses of mineral wool fibers have produced significant increases in the incidence of mesothelioma (IARC, 2002). The intraperitoneal injection studies formed part of the basis for IARC's previous (IARC, 1987) Group 2B classification for mineral wool fibers. Leading scientists agree that intraperitoneal injection studies (i.e., surgical implantation or injection into the chest or abdomen) are the least relevant type of animal study for evaluating potential human risk for fiber exposures, because such studies bypass the animals' natural defense mechanisms and involve a type and pattern of exposure (implantation of a high dose early in life) that does not mimic human patterns of exposure (inhalation of much lower doses over a lifetime) (National Research Council, 2000).

A well-designed long-term inhalation study in rats exposed to mineral wool fibers found no significant increase in lung tumor incidence, and no mesotheliomas (IARC, 2002). Likewise, in two intratracheal instillation studies of mineral wool fibers, no significant increase in the incidence of lung tumors or mesotheliomas was found (IARC, 2002). Inhalation studies are regarded as the most relevant type of animal data for evaluating potential human risk and intratracheal instillation studies relevant, are considered valuable for the initial screening of fibrous compounds (National Research Council, 2000). Thus, evaluating all the available animal studies in conjunction with the human data, IARC's most recent review finds "inadequate evidence overall for any cancer risk" from mineral wool fibers (IARC, 2001).

Source	Classification	Description
IARC	Group 3	Insulation glass wool: Not classifiable as a human carcinogen.
ACGIH	Group A3	Confirmed animal carcinogen with unknown relevance to humans.
OSHA	Not established	There is insufficient evidence that synthetic mineral fibers cause respiratory disease in humans. Results from animal experiments have led to conservative classifications of certain synthetic mineral fibers as possible human carcinogens. Specifically, insulation glass wool and continuous glass filament are not classifiable as to their carcinogenicity to humans.
NTP	Reasonably Anticipated To Be Human Carcinogens	Certain Glass Wool Fibers (Inhalable)

Reproductive toxicity	: This product is not known to contain any components at ≥0.1% that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.
Teratogenicity/Embryotoxicity	: This product is not known to contain any components at ≥0.1% that have been shown to cause teratogenicity and/or embryotoxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a teratogen/embryotoxin.
Specific target organ toxicity (single exposure)	: Coarse fibers and dust from mineral wool products can cause temporary mechanical irritation in the upper respiratory tract (nose and throat). The itching and possible inflammation are a mechanical reaction to dust and coarse fibers (or more than about 5 µm in diameter) and are not damaging in the way chemical irritants may be. The symptoms generally abate within a short time after the end of exposure.

Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

Specific target organ toxicity (repeated exposure)	: This product is not known to contain any components at ≥1.0% that have been shown to cause chronic toxic effects. Therefore, based upon the available data and the known hazards of the components, contact with this product is not expected to cause chronic toxic effects.
Aspiration hazard	: This product is not an aspiration hazard.
Potential Adverse human health effects and symptoms	: Effects of exposure may include irritation of the skin, and of the mucous membranes in the eyes and in the upper respiratory tract (nose and throat).
Toxicologically Synergistic Materials	: None known.

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

No information available.

### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

#### 12.5. Results of PBT and vPvB assessment

No information available.

#### 12.6. Other adverse effects

The products are stable, not expected to cause harm to animals, plants or fish, and have no other known adverse environmental effects.

### **SECTION 13: Disposal considerations**

# 13.1. Waste treatment methods

Waste disposal recommendations

: The products, as supplied, are not expected to be a characteristic hazardous waste under RCRA if discarded. Product is not considered a hazardous waste. Dispose of waste material according to Federal, State, Provincial and Local environmental regulations. Comply with relevant regulations with regards to disposal, recycling, treatment, transportation and storage of contents and containers.

### **SECTION 14: Transport information**

No special precautions. This product is not considered to be a hazardous material for transport.

SECTION 15: Regulatory information			
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture		
15.1.1.	National regulations		
USA		This product has been classified in accordance with the 2012 hazard criteria of the OSHA's HCS and the SDS contains all the information required by the 29 CFR § 1910.1200.	
Canada		This product has been classified in accordance with the hazard criteria of the <i>Controlled Products Regulations</i> and the MSDS contains all the information required by the <i>Controlled Products Regulations</i> .	
Mexico	:	This product has been classified in accordance with NMX-R-019-SCFI-2011.	

All compounds in this product are listed in the Canada Domestic Substances List (DSL) and the US Toxic Substances Control Act (TSCA) Chemical Substance Inventory (1985).

# SECTION 16: Other information

Date of Preparation

: May 29, 2015

Safety Data Sheet

according to Hazardous Products Act and Controlled Products Regulations and 29 CFR § 1910.1200

Sources of Key data	<ul> <li>A complete copy of OSHA-recommended workplace practices and protective equipment when fabricating, installing or removing the products can be obtained from ROXUL Inc. and is available on the OSHA website (<u>http://www.osha.gov/SLTC/syntheticmineralfibers</u>).</li> </ul>
	IARC Monograph Man-made Vitreous Fibres, press release October 2001
	Safety in the Use of Mineral and Synthetic Fibers, Occupational Safety and Health Series, International Labor Office.
	Information about "Health and Safety Research on Rock- and Slag-wool" can be obtained from the North American Insulation Manufacturers Association (NAIMA), 44 Canal Center Plaza, Suite 210, Alexandria, VA 22314, USA). Homepage: <a href="http://www.naima.org">http://www.naima.org</a>
	Complete citations, or copies of all references cited in this SDS can be obtained from ROXUL Inc. (See Section 1).
Abbreviations and acronyms	<ul> <li>ACGIH – American Conference of Governmental Industrial Hygienists bw – body weight CASRN – Chemical Abstracts Service Registry Number CFR – US Code of Federal Regulations DSL – Canada Domestic Substances List GHS – Globally Harmonized System HCS – US Hazard Communication Standard IARC – International Agency for Research on Cancer LD<sub>50</sub> – Acute lethal dose causing 50% lethality in animals (M)SDS – (Material) Safety Data Sheet NAIMA – North American Insulation Manufacturers Association NIOSH – National Institute of Occupational Safety and Health NTP – National Institute of Occupational Safety and Health NTP – National Toxicology Program OSHA – Occupational Safety and Health Administration PEL – Permissible Exposure Limit SCBA – Self-Contained Breathing Apparatus TLV – Threshold Limit Value TSCA – US Toxic Substances Control Act TWA – Time-Weighted Average US – United States of America</li> </ul>

Disclaimer: The information contained herein is based upon data considered to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe upon any patent. This information is furnished as a guide only and upon the condition that the person receiving it shall make tests to determine the accuracy and suitability for his or her own purpose. No responsibility is assumed for injury or damage from the use of the products described herein.