

Safe Use Instruction Sheet

This ROCKWOOL Safe Use Instruction Sheet [SUIS] is provided for manufactured articles neither regulated by OSHA Hazard Communication Standard, 29 CFR 1910.1200 nor by the Canada Hazardous Products Regulation SOR/2015-17 [WHMIS 2015].

ROCKWOOL provides this SUIS for safe handling and use instructions.

1. Identification of the article

Product Name Resin-Bonded Stone Wool Insulation

Product Family	Product Identification	Intended Use
I.	AFB evo	Interior Wall and Floor Applications
II.	COMFORTBOARD™, COMFORTBATT®, SAFE'N'SOUND®, AFB®, CAVITYROCK®, CURTAINROCK®, ROCKBOARD®, ROXUL Plus®, SAFE®	Interior and Exterior Applications
III.	MONOBOARD®, TOPROCK® DD, TOPROCK® DD MULTIFIX	Roof Insulation or Insulating Cover Board over Other Insulations
IV.	MONOBOARD® PLUS, TOPROCK® DD Plus	Low-Slope Roof Applications
IV.	CONROCK®, FABROCK™	OEM

Manufacturer ROCKWOOL

Address

Canada	USA
8024 Esquesing Line	4594 Cayce Rd
Milton, Ontario	Byhalia
Canada	MS 38611
L9T 6W3	USA

Company Phone Number 1-800-265-6878
1-877-823-9790 (8:30 am to 5:00 pm ET)

Email contactus@rockwool.com

2. Hazards identification

OSHA This product is considered an article as per OSHA 29 CFR 1910.1200.

29 CFR 1910.1200(c) defines an article as follows: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

Articles meeting the above definition are not regulated by OSHA 29 CFR 1910.1200 and are exempt from SDS and label requirements.



2. Hazards identification - Continued

WHMIS

This product is considered an article per the Canadian Hazardous Products Regulation SOR/2015-17. Manufactured articles that meet the definition of the Canadian Hazardous Products Act (any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product) are not regulated by the Canadian Hazardous Products Regulation SOR/2015-17 and are exempt from SDS and label requirements.

Adverse physiochemical, human health and environmental effects

This product may cause temporary 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 (see section 8 for safe handling instructions).

3. Composition / information on ingredients

Product Family	Stone wool (a, b)	Non added formaldehyde binder	Phenol Formaldehyde Binder	Syrups, hydrolysed starch	Mineral Oil
I.	97%	<3%	-	<1%	<0.2%
II.	97%	-	<3%	<1%	<0.2%
III.	97%	-	<3%	<1%	<0.2%
IV.	94-67%	-	<3%	<1%	<0.2%
V.	97%	-	<3%	<1%	<0.2%

a: Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na₂O+K₂O+CaO+ MgO+BaO) content greater than 18 % by weight and fulfilling Note Q conditions

b: Man Made Vitreous Wool Fibres are IARC classified as Group 3 (not classifiable as to their carcinogenicity to humans)

Possible facing materials: Mineral fleece, Aluminium foil, Aluminium foil reinforced mineral fiber grid, PE craft paper, Wired mesh, PP film, Plaster board, Mineral cloth, Bitumen.

4. First aid measures

Eye contact Rinse immediately with water for at least 15 minutes.

Skin contact (if itching occurs) Remove contaminated clothing and wash skin gently with cold water and a mild soap. Never use compressed air to remove fibers from skin or clothing.

Inhalation If affected, remove from exposure.

Ingestion Rinse mouth and drink plenty of water.

If any irritation persists, seek immediate medical attention.

5. Fire fighting measures

Suitable extinguishing media Water, Foam, Carbon Dioxide or dry powder (No unsuitable extinguishing firefighting media known.)

Protective equipment for firefighters Do not enter fire area without proper protective equipment, including NIOSH-approved self-contained breathing apparatus (SCBA). Observe normal fire fighting procedures.

6. Accidental release

Personal precautions In case of high concentrations of dust: Ventilate and/or use same protective equipment as mentioned in section 8

Methods for cleaning up Use personal protective equipment as required. Clean contaminated surface with vacuum or dampen with water spray prior to sweeping up. Place waste in appropriate containers for disposal.

7. Handling and storage

Precautions and safe handling No specific measures required. A serrated knife for cutting is preferred. Minimize dust creation and ensure adequate ventilation of workplace.

Storage conditions Keep product dry and in original packaging until use.

Incompatible materials None known.

8. Exposure controls / personal protection

Exposure guidelines Follow all applicable exposure limits. Local regulations may apply. ROCKWOOL recommends that users of the products adhere to the OSHA-recommended 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 is a member. Adherence to the OSHA-recommended PEL, work practices and protective equipment in the HSPP is expected to provide appropriate protection against all inhalation-related 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 ³ TWA-PEL (total particulate) 5 mg/m ³ TWA-PEL (respirable particulate)
ACGIH	Synthetic Vitreous Fibers, > 5 µm length, < 3 µm diameter	1 f/cc TWA (threshold limit value TLV)
	Particulates not otherwise classified, containing no asbestos and < 1% crystalline silica	10 mg/m ³ TWA-PEL (inhalable particulate) 3 mg/m ³ TWA-PEL (respirable particulate)

8. Exposure controls / personal protection

Engineering controls Provide local exhaust and/or general ventilation to main exposure below regulatory and recommended limits. Vacuum or wet cleaning methods recommended.

Individual protection measures, including personal protection

Eyes	Wear safety glasses with side shielding or similar
Skin/body	Wear protective gloves
	Wear long sleeve shirt and long trousers
Respiratory	Ensure proper ventilation
	Use appropriate certified respirator when airborne particulates are above exposure limits (properly fitted NIOSH disposable N95 type dust respirator or better is recommended)
General hygiene	Wash hands with cold water after handling products
	Remove and wash clothes worn during working with product.

9. Physical and chemical properties

Physical State	Solid
Color	Grey, green, brown
Odor	May have slight resin odor
Melting Point	Approximately 2150°F (1177°C)
Water solubility	Insoluble in water

10. Stability and reactivity

Reactivity and Stability Stable under normal conditions of use

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.

11. Toxicological information

Stone wool fibers are not classifiable as OSHA irritants. Coarse fibers and dust from mineral wool products can cause temporary and reversible irritation (itching, redness) of the skin and eyes. The itching and possible inflammation are a mechanical reaction to dust and coarse fibers (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.

Man Made Vitreous Wool Fibers are IARC classified as Group 3 (not classifiable as to their carcinogenicity to humans)

12. Ecological information

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

13. Disposal considerations

The products, as supplied, are not expected to be a characteristic hazardous waste under RCRA if discarded. Products are not considered to be 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.

14. Transport information

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

15. Regulatory information

International Inventories

Articles are exempt from registration or listing chemicals inventories like TSCA (USA), DSL/NDSL (CAN), REACH (EU), ENCS (JP), IECSC (CN), KECL (KR), PICCS (PH), AICS (AUS). Per Section 2. these products are considered an article.

Product Family	California Proposition 65 Status
I.	This product does not contain any Proposition 65 chemicals.
II. - V.	These products contain formaldehyde, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm.

16. Other information

Date of preparation 16-AUG-2018

Date of revision 01-NOV-2018

Comments to revision

Disclaimer

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.

ROCKWOOL reserves the right, at its discretion, to change and modify this Safe Use Instruction Sheet. This version supersedes any Safety Data Sheets and older versions. ROCKWOOL will not take responsibility for documents downloaded from any website except those downloaded directly from www.rockwool.com. ROCKWOOL takes no responsibility for documentation supplied by a third party as ROCKWOOL cannot control the content of such documentation to ensure accuracy.

1. Identification:

- 1.1 Product Generic Name: Mineral Wool Insulation
- 1.2 Product Use: Commercial, Industrial and Residential Insulation
- 1.3 Products:
CavityRock®, ConRock®, CurtainRock®, Roxul DrainBoard®, Enerwrap®, Flexibatt®, ComfortBatt™, RHM™, RHT®, AFB®, RoxulPlus®, RW®, Roxul Safe®, Roxul Safe'n'Sound™, Tecton® 1200, Tecton® 1200 Marine, SturdiRock®, Roxul FireWall™, RockBoard™, TopRock®, MonoBoard™, FabRock™
- 1.4 Company Address: Roxul Inc.
551 Harrop Drive
Milton, Ontario
Canada
L9T 3H3
- 1.5 Web Site: www.roxul.com
- 1.6 If further information is required, please call or fax Roxul Inc.
Telephone: 1-800-265-6878 or 905-878-8474 Fax: 905-878-8077
-

2. Information on Ingredients:

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>%</u>
Mineral Fiber	RN 65997-17-3	94-99
Cured Urea Extended Phenolic Formaldehyde Binder	25104-55-6	1-6

3. Hazards Identification:

- 3.1 Appearance and Odor: Grey, green fibrous batt or board.
- 3.2 Emergency Overview: Acrid smoke may be generated during a fire.
Exposure to dust may be irritating to the eyes, nose and throat.
- 3.3 Potential Health Effects:
- 3.3.1 Inhalation: Temporary mechanical irritation of the upper respiratory tract (scratchy throat, coughing, congestion) may result from exposures to dusts and fibers in excess of applicable exposure limits.
- 3.3.2 Skin Contact: Dusts and fibers may cause temporary mechanical irritation (itching) or redness to the skin.
- 3.3.3 Eye Contact: Dusts and fibers may cause temporary mechanical irritation (itching) or redness to the eyes.
- 3.3.4 Ingestion: Ingestion of this product is unlikely and not intended under normal conditions of use. Ingestion of this product may cause gastrointestinal irritation.
- 3.3.5 Existing Medical Conditions: Pre-existing chronic eye, skin and respiratory conditions may temporarily worsen due to exposure to dusts and fibers.
-

4. First-Aid Measures:

- 4.1 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.
- 4.2 Skin: If irritation occurs, do not rub or scratch. Rinse under running water prior to washing with mild soap and water. Use a washcloth to help remove fibers. If irritation persists, consult a physician.
- 4.3 Eyes: If irritation occurs, flush eyes with plenty of water for at least 15 minutes. Do not rub the eyes. Consult a physician if irritation persists.
- 4.4 Ingestion: Ingestion of this product is unlikely and not intended under normal conditions of use. If it does occur, rinse mouth with plenty of water to help remove dust and fibers, and drink plenty of water to help reduce potential gastrointestinal irritation. Do not induce vomiting unless directed to do so by a physician.
-

5. Fire-Fighting Measures:

The products are non-combustible and do not pose a fire hazard. However, packaging material may burn.

- | | |
|---|---|
| 5.1. <u>Suitable extinguishing media</u> : | Water, foam, carbon dioxide or dry powder |
| 5.2. <u>Extinguishing media which must not be used for safety reasons</u> : | None |
| 5.3. <u>Combustion products</u> : | Carbon dioxide, carbon monoxide and trace gases |
| 5.4. <u>Special protective equipment for fire-fighters</u> : | Observe normal fire fighting procedures |
| 5.5. <u>Flash point</u> : None | <u>Flash Point Method Used</u> : Not Applicable |
| <u>Upper Flammable Limit (UFL)</u> : Not Applicable | <u>Lower Flammable Limit</u> : Not Applicable |
| <u>Autoignition</u> : Not Applicable | <u>Explosive Properties</u> : Not Applicable |
-

6. Accidental Release Measures:

- 6.1 Containment Procedures: Pick up large pieces and scoop up dusts and fibers after they have settled out of air. These materials will disperse and settle along the bottom of waterways and ponds. It cannot easily be removed once it is waterborne, but is considered non-hazardous in water.
- 6.2 Cleanup Procedures: Use OSHA-recommended work practices and protective equipment as described in Section 8 of this Material 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.
- 6.3 Response Procedures: Isolate area. Keep unnecessary personnel away. If dry methods or compressed air are used to collect dusts and fibers, all personnel in the area should wear OSHA-approved protective equipment (see Section 8 of this Material Safety Data Sheet).
-

7. Handling and Storage:

7.1 General Precautions:

- Utilize OSHA-recommended work practices and protective equipment when using the products (see Section 8 of this Material Safety Data Sheet).

7.2 Handling:

- Unpack material at application site to avoid unnecessary handling of product.
- Keep work areas 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.
- Ensure good ventilation. Local exhaust ventilation may be required if the method of use produces dust levels which exceed applicable exposure limits (see Section 8 of this Material Safety Data Sheet).
- 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.

7.3 Storage:

- Keep material in original packaging until it is to be used.
- Store material to protect against adverse conditions including precipitation.

8. Exposure Controls/Personal Protection:

8.1 Exposure Guidelines:

8.1.1 General Product Information: Follow all applicable exposure limits. Local regulations may apply. Roxul recommends that users of the products adhere to the OSHA-recommended PEL of 1 f/cc TWA (fibers longer than 5 µm with diameters less than 3 µm). 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 Roxul is a member. Adherence to the OSHA-recommended PEL, work practices and protective equipment in the HSPP is expected to provide appropriate protection against all inhalation-related 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.

8.1.2 Component Exposure Limits:

<u>Source</u>	<u>Legal or Recommended Exposure Limit</u>	<u>Exposure</u>
OSHA	1 f/cc TWA (recommended)	Synthetic Vitreous Fibers, > 5 µm length, < 3 µm diameter
ACGIH	1 f/cc TWA (threshold limit value - TLV)	Synthetic Vitreous Fibers, > 5 µm length, < 3 µm diameter
OSHA	15 mg/m ³ TWA-PEL (total particulate) 5 mg/m ³ TWA-PEL (respirable particulate)	Inert dust and particulates not otherwise regulated
ACGIH	10 mg/m ³ TWA-TLV (inhalable particulate) 3 mg/m ³ TWA-TLV (respirable particulate)	Particulates not otherwise classified, containing no asbestos and <1% crystalline silica

8.2 Equipment and Work Practices: Follow OSHA-recommended equipment and work practices. A complete copy of these practices can be obtained from Roxul Inc. (see Section 1 of this Material Safety Data Sheet), and is available on the OSHA website (<http://www.osha.gov/SLTC/syntheticmineralfibers>).

8.2.1 Follow OSHA-recommended safe handling practices listed in Section 7.2 above.

8.2.2 Where feasible, general dilution ventilation or local exhaust ventilation should be used as necessary to maintain exposures below applicable exposure limits. Dust collection systems should be used in cutting or machining operations and may be needed when using power tools.

8.2.3 Follow OSHA-recommended work practices when fabricating, installing or removing product.

8.3 Personal Protective Equipment:

8.3.1 Respiratory:

8.3.1.1 General:

In poorly ventilated areas when dusty conditions exist 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-face respirator, rated N99 or higher.

8.3.1.2 Specific Operations:

In poorly ventilated areas when dusty conditions exist and/or dust levels exceed applicable exposure limits, wear a NIOSH certified dust respirator with an efficiency rating of N95 or higher, such as a 3M Model 8210 (or 8710) (3M Model 9900 in high humidity environments) or equivalent, when fabricating, installing or removing product.

8.3.2 Skin:

Wear loose fitting, long sleeved and long-legged clothing to prevent irritation. A head cover is also recommended, especially when working with material overhead. The use of suitable gloves is also recommended. Skin irritation cannot occur if there is no contact with the skin. Do not tape sleeves or pants at wrists or ankles. 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

8.3.3 Eyes/Face:

Wear safety goggles or safety glasses with side shields.

9. Physical and Chemical Properties:

9.1	<u>Appearance:</u>	Grey, green fibrous batt or board
9.2	<u>State:</u>	Solid
9.3	<u>Odor:</u>	May have slight resin odour
9.4	<u>Boiling point:</u>	n.a.
9.5	<u>Melting point:</u>	Approximately 2150 °F (1177 °C)
9.6	<u>Vapour pressure:</u>	n.a.
9.7	<u>Vapour Density:</u>	n.a.
9.8	<u>Specific Gravity:</u>	n.a.
9.9	<u>Evaporation Rate:</u>	n.a.
9.10	<u>Freezing Point:</u>	n.a.
9.11	<u>Viscosity:</u>	n.a.
9.12	<u>Solubility:</u>	Insoluble (H ₂ O)
9.13	<u>Partition coefficient:</u>	n.a.

n.a. = not applicable

10. Stability and Reactivity:

- 10.1 Stability: Stable
- 10.2 Reactivity: Not reactive
- 10.3 Thermal 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.
- 10.4 Hazardous Polymerization: Will not occur
- 10.5 Incompatible Materials: This product reacts with hydrofluoric acid.
-

11. Toxicological Information:

- 11.1 Acute Toxicity:
Coarse fibers and dust from mineral wool products can cause temporary mechanical irritation (itching, redness) of the skin, and of the mucous membranes in the eyes and in the upper respiratory tract (nose and throat). The itching and possible inflammation are a mechanical reaction to dust and coarse fibers (of more than about 5 µm in diameter), and are not damaging in the way chemical irritants may be. They generally abate within a short time after the end of exposure. When products are handled continually, the skin itching generally diminishes.
- 11.2 Chronic Toxicity:
- 11.2.1 Summary: 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:
- 11.2.2 Human Data:
- 11.2.2.1 The possible carcinogenic effects of exposure to mineral wool fibers has been evaluated in a number of epidemiological (human) studies. Most of this 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; Enterline 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).
- 11.2.2.2 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).
- 11.2.3 Animal Data:
- 11.2.3.1 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).

11.2.3.2 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, while less 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).

11.3 Evaluations of Potential Carcinogenicity:

<u>Source</u>	<u>Classification</u>	<u>Description</u>
IARC	Group 3	Not Classifiable as a Human Carcinogen
ACGIH	Group A3	Confirmed Animal Carcinogen with Unknown Relevance to Humans

12. **Ecological Information:**

- 12.1 Ecotoxicity: No data available for the products. The products are stable, are not expected to cause harm to animals, plants or fish, and have no other known adverse environmental effects.
- 12.2 Environmental Fate: No data available for the products.

13. **Disposal Considerations:**

- 13.1 US EPA Waste Number & Descriptions:
- 13.1.1 General Product Information: The products, as supplied, are not expected to be a characteristic hazardous waste under RCRA if discarded.
- 13.1.2 EPA Waste Numbers: No EPA Waste Numbers are applicable for this product's components.
- 13.2 Disposal Instructions: Product is not considered a hazardous waste. Dispose of waste material according to Federal, State, Provincial, and Local environmental regulations.

14. **Transport Information:**

- 14.1 General: No special precautions.
- 14.2 US DOT Information: This product is not classified as a hazardous material for transport.

15. **Regulatory Information:**

- 15.1 U.S. Regulations:
- 15.1.1 Toxic Substances Control Act (TSCA): All components in this product are listed, as required, on the US EPA TSCA inventory, or are not required to be listed
- 15.1.2 CERCLA: Includes mineral fiber emissions from facilities manufacturing or processing glass rock or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less; Statutory RQ = 1 pound (.454 kg); no final RQ is being assigned to the generic or broad class (related to Fine mineral fibers).

- 15.1.3 Clean Air Act: Mineral wool fiber appears on the Clean Air Act-1990 Hazardous Air Pollutants List.
- 15.2 State and Local Regulations: State, Provincial, and Local regulations not identified in this Material Safety Data Sheet may apply.
- 15.3 WHMIS: The products have been classified in accordance with the hazard criteria of the Controlled Product Regulations and this Material Safety Data Sheet contains all the information required by the Controlled Product Regulations
- 15.3.1: WHMIS IDL: No components are listed on the IDL
- 15.3.2: WHMIS Classification: No components are classified as controlled products.

16. Further Information:

16.1 Potential Health Effects:

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 (ILO).

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 310, Alexandria, VA 22314, USA). Home-page: <http://www.naima.org>

16.2 Key/Legend:

ACGIH = American Conference of Governmental Industrial Hygienists; CAA = Clean Air Act; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; DOT = Department of Transportation; EPA = Environmental Protection Agency; HMIS = Hazardous Material Identification System; HSPP = Health and Safety Partnership Program; IARC = International Agency for Research on Cancer; MSDS = Material Safety Data Sheet; NAIMA = North American Insulation Manufacturers Association; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; RCRA = Resource Conservation and Recovery Act; RQ = Reportable Quantity; SVF = synthetic vitreous fibers; TSCA = Toxic Substances Control Act; TWA = time-weighted average; WHMIS = Workplace Hazardous Materials Information System.

- 16.3 References: Complete citations, or copies, of all references cited in this Material Safety Data Sheet can be obtained from Roxul Inc. (see Section 1).

- 16.4 Accuracy: 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.



SAFETY DATA SHEET

Creation Date 21-Sep-2018

Revision Date 27-Sep-2018

Version 1

1. IDENTIFICATION

Product Name Thermafiber Shot

Product Code OCMW00010

Manufacturer Address Thermafiber Inc.
One Owens Corning Parkway
Toledo, Ohio 43659

Company Phone Number 1-800-GET-PINK or 1-800-438-7465

24 Hour Emergency Phone Number Chemtrec 1-800-424-9300 or 1-703-741-5970 CCN17393

Emergency Telephone 1-419-248-5330 (after 5 pm ET and weekends)

Company Website <http://owenscorning.com/>

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This product is not classified as hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Hazards not otherwise classified (HNOC) May cause temporary skin and mucous membranes itching due to the mechanical abrasion effect of fibers

Unknown acute toxicity No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Components

Chemical name	CAS No	Weight-%	Trade Secret
Mineral Wool	65997-17-3	95-100	*
Phenol-formaldehyde resin	9003-35-4	1-5	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

Comments

The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product

4. FIRST AID MEASURES

Description of First Aid Measures

- | | |
|--------------------|---|
| Eye contact | <ul style="list-style-type: none">• Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician |
| Skin contact | <ul style="list-style-type: none">• Wash skin with soap and water |
| Inhalation | <ul style="list-style-type: none">• Remove to fresh air |
| Ingestion | <ul style="list-style-type: none">• Clean mouth with water and drink afterwards plenty of water |
| Note to physicians | <ul style="list-style-type: none">• Treat symptomatically |

5. FIRE-FIGHTING MEASURES

- | | |
|---|---|
| Suitable extinguishing media | <ul style="list-style-type: none">• Use extinguishing measures that are appropriate to local circumstances and the surrounding environment |
| Unsuitable extinguishing media | <ul style="list-style-type: none">• Caution: Use of water spray when fighting fire may be inefficient |
| Specific hazards arising from the chemical | <ul style="list-style-type: none">• No information available |
| Explosion data | |
| Sensitivity to Mechanical Impact | • No |
| Sensitivity to Static Discharge | • No |
| Protective equipment and precautions for firefighters | <ul style="list-style-type: none">• As in any fire, wear self-contained breathing apparatus (positive-pressure), MSHA/NIOSH (approved or equivalent) and full protective gear |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- | | |
|---------------------------|---|
| Personal precautions | <ul style="list-style-type: none">• Ensure adequate ventilation, especially in confined areas |
| Environmental precautions | <ul style="list-style-type: none">• See Section 12 for ecotoxicology additional information |

Methods and material for containment and cleaning up

- | | |
|-------------------------|---|
| Methods for containment | <ul style="list-style-type: none">• Cover with plastic sheet to prevent spreading |
| Methods for cleaning up | <ul style="list-style-type: none">• Use personal protective equipment as required• Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry• Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination• Avoid creating dust |

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities

- | | |
|--------------------|---|
| Storage Conditions | <ul style="list-style-type: none">• Keep containers tightly closed in a dry, cool and well-ventilated place |
|--------------------|---|

Incompatible materials

• None known based on information supplied

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
Mineral Wool 65997-17-3	TWA: 1 fiber/cm ³ respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m ³ inhalable particulate matter		
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	TWA: 0.75 ppm STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

NIOSH REL *Immediately Dangerous to Life or Health*

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Controls

- Showers
- Eyewash stations
- Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

- Wear safety glasses with side shields (or goggles)

Skin and body protection

- Wear protective gloves
- Wear long-sleeved shirt and long pants

Respiratory protection

- If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

General Hygiene Considerations • Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Solid

Odor

No information available

Color

No information available

Melting point / freezing point

Boiling point / boiling range

Flash point

Autoignition temperature

No information available

10. STABILITY AND REACTIVITY

Reactivity

- No data available

Chemical stability

- Stable under recommended storage conditions.

Possibility of Hazardous Reactions • None under normal processing

- Conditions to avoid • No information available
- Incompatible materials • None known based on information supplied
- Hazardous Decomposition Products • None known based on information supplied

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Chemical name	Oral LD50	LD50/dermal/rat - NO UNITS (Wizards mg/kg)	Inhalation LC50
Phenol-formaldehyde resin 9003-35-4	> 5 g/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
Germ cell mutagenicity
Carcinogenicity

No information available.
No information available.
This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical name	ACGIH	IARC	NTP	OSHA
Mineral Wool 65997-17-3	-	Group 3	-	-
Formaldehyde 50-00-0	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 3 - Not classifiable as a human carcinogen

Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Aspiration hazard

No information available.
No information available.
No information available.
No information available.
mg/kg

12. ECOLOGICAL INFORMATION

- Persistence and degradability • No information available
- Bioaccumulation • No information available
- Other adverse effects • No information available

13. DISPOSAL CONSIDERATIONS

- Disposal of wastes
 - Disposal should be in accordance with applicable regional, national and local laws and regulations
- Contaminated packaging
 - Do not reuse container

14. TRANSPORT INFORMATION

- DOT Not regulated
- TDG Not regulated
- MEX Not regulated
- ICAO (air) Not regulated
- IATA Not regulated
- IMDG Not regulated
- RID Not regulated
- ADR Not regulated
- ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Mineral Wool 65997-17-3	X	X		926-099-9		X	X	X	X	X
Phenol-formaldehyde resin 9003-35-4	X	X				X	X	X	X	X

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonia	100 lb	-	-	X

7664-41-7				
Formaldehyde 50-00-0	100 lb	-	-	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonia 7664-41-7	100 lb	100 lb	RQ 100 lb final RQ
Formaldehyde 50-00-0	100 lb	100 lb	RQ 45.4 kg final RQ RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65



This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical name	California Proposition 65
Formaldehyde 50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Formaldehyde 50-00-0	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Creation Date 21-Sep-2018
 Revision Date 27-Sep-2018
 Revision Note No information available

Disclaimer

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safety Data Sheet