

Material Safety Data Sheet

SKAMOL SUPER-1100 'E' Calcium Silicate Slab Insulation

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

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TRADE NAME: SKAMOL Super-1100 'E'	
CHEMICAL NAME: Mixture of synthetic and natural calcium silicates reinforced with cellulose fibers	SYNONYMS: Calcium silicate slab insulation
PREPARED BY: Clayton Environmental Consultants, Inc.	REVISED BY: Skamol A/S
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2. INGREDIENTS

<u>Component</u>	<u>CAS Number(s)</u>	<u>Percent</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>Units</u>
Synthetic and natural calcium silicates	1344-95-2	96	10	15	mg/m ³
	13983-17-0			5*	mg/m ³
	12141-77-4				
Calcite	13397-26-7	3	10	15	mg/m ³
				5*	mg/m ³
Cellulose fibers	--	1	NE**	NE**	--

* Respirable dust

** Not established

ACGIH TLVs are 1995-1996 values; OSHA PELs are those in effect on the date of preparation of this Material Safety Data Sheet. The listed TLVs and PELs are 8-hour time-weighted average exposure limits. The TLV and PELs listed for calcite are the TLV and PELs for "calcium carbonate" (CAS No. 1317-65-3).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Product is blocks or boards having grey color and no odor. Dusts generated during sawing, cutting, or abrasion of product may cause irritation of the eyes, skin, mucous membranes, and respiratory tract. Use appropriate personal protective equipment. Keep unnecessary personnel out of the area when working with the product.

POTENTIAL HEALTH EFFECTS:

Eye Contact: Dusts may cause irritation.

Skin Contact: Dusts may cause irritation.

Skin Absorption: Not known to be absorbed through intact skin.

Inhalation: Dusts may cause respiratory tract and mucous membrane irritation.

Ingestion: Not expected to be an important route of entry into the body. Ingestion of large amounts of the product may cause irritation of the mouth, esophagus, and stomach.

CHRONIC AND CARCINOGENIC HEALTH EFFECTS:

Prolonged contact with dusts from this product may cause dermatitis.

The product is not known to contain materials that have been found to be carcinogenic by IARC, NTP, or OSHA.

Pre-existing lung and skin conditions possibly may be aggravated by prolonged exposure to high concentrations of the product.

4. FIRST AID MEASURES

Inhalation: Remove exposed person to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.

Eyes: Flush with tepid water for at least 20 minutes while holding the eyelids wide open. Seek medical attention if irritation develops.

Skin: Wash thoroughly with mild soap and water. Seek medical attention if irritation develops. Launder contaminated clothing before reuse.

Ingestion: Not expected to be an important route of entry into the body. If large amounts of the product are ingested, seek medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: None

LEL: None

UEL: None

AUTOIGNITION TEMPERATURE: None

Product will not burn in air. Use fire-fighting methods suitable for other materials present in the surrounding fire.

A self-contained breathing apparatus operating in positive pressure mode and full fire fighting gear should be worn for combating fires.

6. ACCIDENTAL RELEASE MEASURES

Pick up released product using appropriate implements and place in appropriate containers for disposal. Appropriate personal protective equipment cited in Section 8 should be worn during cleanup operations. Although the product itself is not classified as a hazardous material under EPA and DOT regulations, material collected during cleanup may be contaminated with hazardous materials. If there is a potential for contamination with hazardous materials, material collected during cleanup should be treated as hazardous until specific testing, including TCLP, shows the material to be non-hazardous.

7. HANDLING AND STORAGE

Wear appropriate protective equipment cited in Section 8 during handling. Good housekeeping practices should be employed to prevent generation and accumulation of dusts.

After handling product, wash face and hands before eating, drinking, or smoking.

8. EXPOSURE CONTROL - PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation should be provided as needed to maintain exposures below the limits cited in Section 2. Design details for ventilation systems can be found in the most recent edition of *Industrial Ventilation – A Manual of Recommended Practice*, published by the American Conference of Governmental Industrial Hygienists, P.O. Box 16153, Lansing, MI 48910. A professional industrial hygienist should evaluate the need for ventilation. A professional engineer should design ventilation systems.

RESPIRATORY PROTECTION: If exposures may exceed the limits cited in Section 2, use, as a minimum, a NIOSH-approved half-facepiece respirator with cartridges approved for particulates having an exposure limit of not less than 0.05 mg/m³. If exposures may exceed 10 times the limits cited in Section 2, consult respiratory protective equipment suppliers or a professional industrial hygienist for assistance in selection of proper respiratory protective equipment. The evaluation of a need for respiratory protective equipment should be made by a professional industrial hygienist. Employees who use respiratory protection must be included in a respiratory protection program that conforms to the requirements of OSHA standards or corresponding state laws and regulations.

EYE PROTECTION: Safety glasses with side shields should be worn when working with this product. Goggles should be worn while the product is being sawed or ground. Do not wear contact lenses when working with this product.

SKIN PROTECTION: Use of protective gloves is recommended to prevent possible irritation while working with this material. Leather gloves or polymeric materials such as polyvinyl chloride are suggested to minimize scratching or abrasion of the skin. A polymer-coated apron is recommended where there is a possibility that work clothing may become heavily contaminated with dust from working with this product. Soiled work clothing and personal protective equipment should be thoroughly cleaned before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND PHYSICAL STATE: Grey solid

MELTING POINT: 2515°F (1,380 °C)

VAPOR DENSITY (AIR=1): Not applicable

**OCTANOL/WATER PARTITION
COEFFICIENT:** Not applicable

VAPOR PRESSURE: Not Applicable

EVAPORATION RATE: Not applicable

ODOR: None

SPECIFIC GRAVITY/BULK DENSITY:
Bulk density 16 lbs/cu.ft. (260 kg/m³)

% VOLATILES BY VOLUME: Not volatile

BOILING POINT: Not determined

% SOLUBILITY IN WATER: 0

pH: (in mixture with water) 8

10. STABILITY AND REACTIVITY

STABILITY (CONDITIONS TO AVOID): None known

INCOMPATIBILITIES: No known chemical incompatibilities.

HAZARDOUS DECOMPOSITION PRODUCTS: None known. Product is stable at service temperatures up to 2012°F (1,100 °C)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Synthetic, non-fibrous calcium silicate (CAS No. 1344-95-2) reportedly can cause irritation of the respiratory tract. In a study involving exposure of rats to dust from calcium silicate insulation products for 7 hours per day, 5 days per week, over a period of 12 months, the mortality in the exposed groups was the same as the controls during the 31 months of the experiment. Pulmonary lesions were found only in a group of animals exposed to dust from a product that also contained approximately 1% quartz. There was little or none of the original calcium silicate identified in analysis of the lung tissues due to its ease of conversion into calcium salts and amorphous silica.

Wollastonite, which is used in manufacture of the product, may be present in the final product. In a survey of respiratory morbidity among wollastonite workers, it was concluded that wollastonite workers having more than 30 years of exposure had ventilatory obstruction that was attributable to exposure to wollastonite dust.

There is little information available on the toxicology of xonotlite, a synthetic crystalline calcium silicate that has been shown by laboratory analysis to be present in the product. A 1994 report on the biodurability of xonotlite and wollastonite instilled intratracheally in rats indicated that wollastonite fibers were eliminated from the lungs with half-times of 15 to 21 days, and that xonotlite was eliminated more quickly. The authors concluded that the relatively fast dissolution should minimize the health effects related to inspired fibers.

The cellulose fibers in the product are coarse and unlikely to become airborne in hazardous concentrations.

12. ECOLOGICAL INFORMATION

Detailed studies on the environmental fate of the product have not been conducted. However, it is not expected that the product would present a hazard to aquatic and terrestrial flora and fauna.

13. DISPOSAL CONSIDERATIONS

This product is not classified as a hazardous waste under current EPA regulations. Disposal at an EPA-approved landfill is recommended. If product may be contaminated with other materials, testing, including TCLP, should be performed to determine the hazard characteristics. It is the user's responsibility to dispose of all wastes in accordance with local, state, and federal regulations.

14. TRANSPORTATION INFORMATION

DOT Classification: Not regulated

15. REGULATORY INFORMATION

This product is not regulated under SARA Title III, Section 313. It may be reportable under SARA Title III, Sections 311 and 312.

OSHA Hazard Communication Categories: Irritant, Skin-hazard, Lung-hazard

WHMIS Classification: D2B.

16. OTHER INFORMATION

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IMPORTANT SAFETY NOTICE: The information in the Material Safety Data Sheet relates only to the specific material described herein and does not relate to use in combination with any other material or substance or in any process. We believe that the information contained herein is current as of the date of issue of this Material Safety Data Sheet.

Because the use of this information and the conditions of use of this product are not within the control of Skamol A/S and Skamol, Inc., it is the user's obligation to determine the conditions of safe use of this product.

Users of this product should study this Material Safety Data Sheet and become aware of the product hazards and safety information before using the product. Users should also notify their employees, agents, and contractors regarding information contained in this Material Safety Data Sheet and any product hazards and safety information in order to provide for safe use of this product.