

Canadian Soapstone

MATERIAL SAFETY DATA SHEET

SUBSTANCE INFORMATION

SUBSTANCE: SOAPSTONE SYNONYM(S): steatite
MOLECULAR FORMULA: $3\text{MgO}\cdot 4\text{SiO}_2\cdot \text{H}_2\text{O}$
CHEMICAL FAMILY: Silicate

COMPONENTS

MAJOR COMPONENT: Talc, CAS #14807-96-6 CONCENTRATION: ~50-95%

MINOR COMPONENTS: soapstone is a naturally occurring mineral which may contain varying minor amounts of the following non-talc minerals:

Dolomite, CAS #16389-88-1	CONCENTRATION: ~0-5%
Magnesite, CAS #546-93-0	~40-50%

OSHA & ACGIH AIR BORNE DUST EXPOSURE LIMITS

TALC: 5 mg/m³ OSHA TWA (resp. dust) and 3 mg/m³ ACGIH TWA (resp. dust)

DOLOMITE, MAGNESITE: 5 mg/m³ OSHA TWA (resp. dust) and 10 mg/m³ ACGIH TWA (total dust)

TOXICITY

TOXICITY DATA: Tumorigenic data (RTECS).
CARCINOGEN STATUS: Human inadequate evidence, animal inadequate evidence (IARC Group 3).

HEALTH EFFECTS AND FIRST AID

→ INHALATION

ACUTE EXPOSURE: Exposure to a large concentration of air-borne dust of this material may cause mechanical irritation of the mucous membranes and respiratory tract.

CHRONIC EXPOSURE: Repeated or prolonged inhalation of air-borne dust of this material may cause scarring of the lungs (pulmonary fibrosis), with shortness of breath, chronic cough, and respiratory assisted heart failure. Prolonged exposure to talc can produce a mild symptomatic pneumoconiosis.

FIRST AID: Remove from exposure area to fresh air. If breathing has stopped, perform artificial respiration and get medical attention immediately. Keep person warm and at rest. Treat symptomatically and supportively.

→ SKIN CONTACT

ACUTE EXPOSURE: Direct contact may cause dryness, or may cause mild irritation if an allergic predisposition exists.

CHRONIC EXPOSURE: Prolonged contact may cause dryness of the skin, or may cause mild irritation if an allergic predisposition exists.

FIRST AID: Apply common skin moisturizers to relieve dryness. Irritations are uncommon; however, if irritation or redness develops, seek medical attention. Broken skin can be cleansed with mild soap and water.

➔ EYE CONTACT

ACUTE EXPOSURE: Direct contact with dust may cause mechanical irritation of the eyes.

CHRONIC EXPOSURE: Repeated exposure may cause conjunctivae inflammation.

FIRST AID: Wash eyes with large amounts of water or normal saline solution. If irritation or redness develops, seek medical attention.

➔ INGESTION

ACUTE EXPOSURE: This material is considered to be harmless and inert when ingested.

CHRONIC EXPOSURE: Repeated ingestion of large doses of talc for 13 and 10 successive days by rabbits and mice, revealed negative teratogenic and carcinogenic results.

FIRST AID: Treat symptomatically and supportively. If vomiting occurs, keep head lower than hips to prevent aspiration.

FIRE, EXPLOSION & REACTIVITY SECTION

FIRE AND EXPLOSION HAZARD: None

FIRE FIGHTING MEDIA: None

FLASH POINT: None

REACTIVITY: Stable

INCOMPATIBILITIES: None

DECOMPOSITION: None hazardous

PHYSICAL DATA

DESCRIPTION: Slight earthy odor, light to dark gray and green

SPECIFIC GRAVITY: 2.7-2.8

DECOMPOSITION TEMPERATURE: Talc: +1630 -1640°F (900°-1000°C

LOI @ +1630°C - 1640°C : 10-30%

SOLUBILITY IN WATER: Insoluble

pH: Slightly alkaline

HARDNESS: 1.0-1.5 MOHS to
2.5 – 4 MOHS
Surface treatment: 4 MOHS

Talc : 40-50% Magnetite :40-50% Chlorite :5-8%

Refraction and traction : --parallel to the strata : 16.8 MN / m², --perpendicular to the strata : 15.7 MN / m²

Specific weight : 2.980 kg / m² Density: 2,6 to 2,7 g/cm³ Compr. ratio : 25 MN/ m²

Coefficient of dilatation : for T °C > 500 °C : 0.0017% °C

Thermal conductivity : 3 W/m.K to 6.4 W/mK Specific heat : 0.98 kJ/kg °C (980 J/Kg.K)

OTHER SOLVENTS: soapstone is soluble in highly concentrated, hot phosphoric acid; insoluble in cold acids and alkalis. Magnetite and dolomite release carbon dioxide in acid.

STORAGE, DISPOSAL & ENVIRONMENTAL

STORAGE: can be stored under any conditions

WASTE DISPOSAL: Dry material can be landfilled. Observe all federal, state and local regulations.

CONDITIONS TO AVOID: Prevent dispersion of dust in air.

RCRA: Soapstone is not considered a hazardous waste by RCRA criteria (40 CFR 261). Observe all federal, state and local regulations when storing or disposing of this substance.

PROTECTIVE EQUIPMENT

VENTILATION: Provide local exhaust or process enclosure ventilation to meet published exposure limits.

RESPIRATOR: The following maximum-use concentrations and respirators are recommendations by the U.S. Department of Health and Human Services; NIOSH Pocket Guide to Chemical Hazards; NIOSH criteria documents; or by the U.S. Department of Labor, 29 CFR 1910 subpart Z.

<u>Max. Use Concentration</u>	<u>Respirator</u>
10 mg/m ³	Any dust and mist respirator.

20 mg/m³.....Any dust and mist respirator except single-use and quarter-mask respirators.

GLOVES: Protective gloves are not required, but may be worn to prevent skin dryness or irritation due to skin allergy.

EYE PROTECTION: Employees should wear dust-resistant safety goggles to prevent eye contact with high concentrations of air-born dust of this substance. Where there is a possibility that an employee's eyes may be exposed to bulk quantities or high concentrations of air-born dust of this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use.

ADDITIONAL INFORMATION

NPCA: National Paint and Coatings Association -- Hazardous Material Identification System (HMIS)

HEALTH HAZARD: 1--slight

FLAMMABILITY HAZARD: 0--minimal

REACTIVITY HAZARD: 0--minimal

PERSONAL PROTECTION: E--glasses, gloves, dust respirator

CERCLA RATINGS (Scale 0-3): Health = 0, Fire = 0, Reactivity = 0, Persistence = 3

NFPA RATINGS (Scale 0-4): Health = 0, Fire = 0, Reactivity = 0

DOT CLASS: This substance is not regulated as hazardous material by DOT.

EPA TSCA STATUS: All ingredients are included on the TSCA Inventory of Chemical Substances.

CEPA DSL STATUS: All ingredients are included on the Canadian Domestic Substance List.

ACGIH CARCINOGENICITY DESIGNATION: A4 - Not classifiable as a human carcinogen.

FDA STATUS: All products are approved for use in polymeric and cellulosic compounds intended for food contact applications.

EUROPEAN EINECS STATUS: All ingredients are listed. The EINECS number for talc is 238-877-9.

CALIFORNIA PROP 65 STATUS: Talc, and its natural components, pose "no significant risk" as defined by the California Proposition 65 Clean Water Regulations.

NEW JERSEY RTK: Talc, p.119.

ASBESTOS CERTIFICATION: These products do not contain asbestos or asbestiform minerals.

DISCLAIMER

The information contained herein is based on available data developed by Luzenac America and is believed to be correct. The same information is considered correct by Canadian Soapstone. However, Canadian Soapstone makes no warranty, expressed or implied, regarding the accuracy or completeness of this information or the results to be obtained from the use thereof.

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