

**FoundryGeneral® Steel Mudding Compound --**

**Section 1. Supplier Information**



**FoundryGeneral® c/o General Chemical Corp.**

12336 Emerson Drive  
www.foundrychem.com  
Brighton, MI 48116  
(248) 587-5600

**Emergency Telephone: 1-800-424-9300**

**Section 2. Hazardous Ingredients**

Hazardous Component(s)	CAS #	PEL TWA	PEL Ceiling	TLV TWA	TLV STEL	MFG Limits	WGT %
Crystalline silica (quartz)	14808-60-7	10 mg/m	0.1 mg/m	0.1 mg/m	N/E	N/E	10 - 30
Talc	14807-96-6	20 mppc	N/E	2 mg/m <sup>3</sup>	N/E	N/E	10 - 30
Kaolin clay	1332-58-7	5 mg/m <sup>3</sup>	respirabl	2 mg/m <sup>3</sup>	N/E	N/E	10 - 30
Aliphatic hydrocarbons	64742-88-7	5 mg/m <sup>3</sup>	N/E	5 mg/m <sup>3</sup> *	10 mg/m	100 ppm	< 5

N/A = Not Applicable; N/E = Not Established; \* = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; \*\* = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

**Section 3. Hazards Identification**

**Primary Routes of Entry**

Inhalation: YES  
Skin: YES  
Ingestion: NO

**Hazardous Materials Information System (HMIS) Ratings**

Health: \* 2  
Fire: 0  
Reactivity: 0  
0 = Minimal  
1 = Slight  
2 = Moderate  
3 = Serious  
4 = Severe  
\* = Chronic Hazard

**Signs of Symptoms of Exposure:**

**INHALATION:** Overexposure to vapor or mist may cause dizziness, loss of concentration, and irritation. With high exposure levels, effects can include central nervous system (CNS) depression (intoxication) and cardiac arrhythmia. Product vapors displace air and can cause suffocation, especially in a confined space.

**SKIN:** Material is mildly irritating to the skin. Prolonged or repeated contact may cause defatting and drying of the skin, resulting in irritation and dermatitis.

**EYES:** Minimally irritating to the eyes. High vapor concentrations may be irritating.

**INGESTION:** Ingestion of this product may result in vomiting. Aspiration (breathing) of vomitus into the lungs must be avoided, as even small quantities may result in aspiration pneumonitis.

**FoundryGeneral® Steel Mudding Compound --**

---

**Chemical Listed as Potential Carcinogens:**

NTP: YES

IARC: YES

OSHA: YES

Target Organs: Eyes, skin, and respiratory system.

---

**Section 4. Emergency And First Aid Procedures**

INHALATION: If adverse effects such as dizziness, nausea, or irritation are noted, move person to fresh air. If not breathing, give artificial respiration. Get medical attention!

SKIN: Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

EYES: Flush eyes immediately with water for at least 15 minutes. If irritation persists, call a physician.

INGESTION: DO NOT INDUCE VOMITING! Contact a physician immediately!

---

**Section 5. Fire Fighting Measures**

Flash Point: None.

Method Used: N/A

Flammable Limits in Air % by Volume: LEL: N/E UEL: N/E

Extinguisher Media: Use media most appropriate for surrounding fire.

Special Fire Fighting Procedures: Firefighters should wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode, and protective clothing.

Unusual Fire And Explosion Hazards: Low fire hazard when exposed to heat and flame. Product is not flammable or combustible.

---

**Section 6. Accidental Release Measures**

If material is spilled, absorb with sand, earth, or similar inert material. Place in closed, labeled containers for proper disposal.

CERCLA (Superfund) Reportable Quantity (in lbs) None.

---

**Section 7. Handling and Storage**

Handling: Avoid contact with skin and eyes; wash thoroughly after handling. Avoid breathing vapor; use with adequate ventilation.

Storage: Store in a dry location at room temperature. Keep container closed and maintain all original markings and labels.

Other: Do not reuse container without recycling or reconditioning. Handle empty containers as if they were full.

---

**Section 8. Exposure Controls and Personal Protection**

Respiratory Protection: Use NIOSH / MSHA approved respirator where high vapor or mist concentrations are present.

Local Exhaust: None normally required. Local exhaust may be needed under special circumstances such as poorly ventilated areas, evaporation from large surfaces, spraying, heating, etc.

Mechanical Exhaust: Mechanical ventilation should be sufficient to maintain exposure levels below exposure limits.

Protective Gloves: Wear chemical resistant gloves.

Eye Protection: At a minimum, wear safety glasses with side shields.

**FoundryGeneral® Steel Mudding Compound --**

Other Protection: Eye wash and safety shower should be readily available.

Hygienic Practices: Avoid contact with skin and avoid breathing vapors or mist. Do not eat, drink, or smoke while using this product. Wash up prior to eating, drinking, or using the restroom.

**Section 9. Physical and Chemical Properties**

Boiling Point:	N/E	Degree of water solubility:
Specific Gravity (H <sub>2</sub> O=1):	1.6-1.8	Negligible = Less than 0.1%
Vapor Pressure (mm Hg):	N/E	Slight = 0.1% - 1%
Vapor Density (air=1)	N/E	Moderate = 1% - 10%
Solubility in Water:	Negligible.	Appreciable = More than 10%
Reactivity in Water:	None.	Complete = 100%
Weight per Gallon (lb/gal):	14.0 - 14.2 lbs/gal	
% Volatile by Volume:	N/E	
% Solid by Weight:	N/E	
Appearance and Odor:	Tan to gray paste	
Theoretical VOC: (>0.1 mm Hg @ 20 ° C)	0.49 - 0.5 lbs/gal	
Analytical VOC : (EPA method 24)	N/E	
pH:	N/E	

**Section 10. Stability and Reactivity**

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid: Open flames.

Incompatibility (Materials to Avoid): Strong oxidizing agents.

Hazardous Decomposition Products: Various organic compounds and oxides of carbon.

**Section 11. Toxicological Information**

Crystalline silica (quartz) [CASRN 014808-60-7]

ACUTE TOXICITY: The method of exposure to crystalline silica that can lead to the adverse health effects described below is inhalation

**A. SILICOSIS**

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute. Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the

**FoundryGeneral® Steel Mudding Compound --**

---

symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pulmonale). Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid. Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

**B. CANCER**

IARC - The International Agency for Research on Cancer ("IARC") concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "sufficient evidence in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997).

NTP - The National Toxicology Program, in its Ninth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known human carcinogen.

OSHA - Crystalline silica (quartz) is not regulated by the U. S. Occupational Safety and Health Administration as a carcinogen.

**C. AUTOIMMUNE DISEASES**

Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers. For a review of the subject, the following may be consulted: "Occupational Exposure to Crystalline Silica and Autoimmune Disease", Environmental Health Perspectives, Volume 107, Supplement 5, pp. 793-802 (1999); "Occupational Scleroderma", Current Opinion in Rheumatology, Volume 11, pp. 490-494 (1999).

**D. TUBERCULOSIS**

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); "Risk of pulmonary tuberculosis relative to silicosis and exposure to silica dust in South African gold miners," Occup Environ Med., Volume 55, pp.496-502 (1998).

**E. KIDNEY DISEASE**

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", Nephron, Volume 85, pp. 14-19 (2000).

**F. NON-MALIGNANT RESPIRATORY DISEASES**

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below, for information concerning the association between exposure to crystalline silica and chronic

**FoundryGeneral® Steel Mudding Compound --**

---

bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

Talc [CASRN 014807-96-6]

INHALATION: TCLO (rat) = 11 mg/m<sup>3</sup> administered intermittently over a year produces a toxic effect. Inhalation of dust may cause sneezing, coughing, and nose irritation. Long-term excessive exposures may cause talcosis, a pulmonary fibrosis, which in turn may lead to severe and permanent damage to the lungs.

SKIN: Implant, TDLO (rat) = 200 mg/kg; Human skin: 300 micrograms administered intermittently over a 3 day period produces mild irritation. The abrasiveness of the material may cause skin irritation.

EYE: Abrasion may cause irritation.

INGESTION: May cause mild irritation of the gastrointestinal tract. [1,0-12,12,15,P,D,I-112697]

Kaolin clay [CASRN 001322-58-7]

Not Available

Solvent naphtha, medium aliphatic [CASRN 064742-88-7]

ACUTE TOXICITY Oral LD50 (rat) > 25 mL/kg Eye Irritation: negligible (rabbit)

Dermal LD50 (rabbit) > 4 mL/kg Skin Irritation: moderate (rabbit)

Inhalation LC50 (rat) > 700 ppm/4 hour

Other Testing: Animal data suggest that slight anemia, adaptive liver changes, and kidney toxicity (male rat nephropathy) may be caused by repeated over exposure to some similar solvents. The relevance of this effect to man is unknown.

Neurotoxicity: Repeated exposures which cause acute neurological effects may also cause long-term neurological deficits in humans.

Carcinogenicity: Animal data suggest that repeated dermal exposures that cause severe skin irritation may cause or promote skin cancer. [18,7-18,18,3,D,I-060500]

---

**Section 12. Ecological Information**

Crystalline silica (quartz) [CASRN 014808-60-7]

ECOTOXICITY: Crystalline silica (quartz) is not known to be ecotoxic; i.e., there are no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

Kaolin clay [CASRN 001322-58-7]

Not Available

---

**Section 13. Disposal Considerations**

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

**FoundryGeneral® Steel Mudding Compound --**

---

RCRA Hazardous Waste Number: N/A

---

**Section 14. Transport Information**

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk: NOT REGULATED

Domestic ground bulk: NOT REGULATED

International: NOT REGULATED

---

**Section 15. Regulatory Information**

SARA 313 Information 'This product contains the following chemical(s) above de minimis concentrations and may be subject to reporting under section 313:

None.

---

**Section 16. Other Information**

This MSDS contains revisions in the following sections: New product

Prepared by: General Chemical

Revised by:

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s).

We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.