# SAFETY DATA SHEET

Conforms to OSHA HazCom 2012, CPR, NOM-018-STPS-2000 Standards & GHS

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

### Product Name: Silica Fume

**Product Identities:** Silica Fume, amorphous silica, densified silica fume, condensed silica fume.

**Supplier/Manufacture:**
Diversified Minerals Inc.
1135 E. Wooley Road
Oxnard CA, 93030
(888) 364-9595

**Poison Control System:**
**(800) 222-1222**

**Recommended Uses**: Silica fume is added to concrete to improve its compressive strength, bond strength, and abrasion resistance. These improvements stem from both the mechanical improvements resulting from addition of a very fine powder to the cement paste mix as well as from the pozzolanic reactions between the amorphous silica and free calcium hydroxide in the paste.

**Restrictions on Use:** Strong acids, Fluorine and Strong Oxidizing Agents

## SECTION 2: HAZARD IDENTIFICATION


**GHS Classification:** (Please see GHS Classifications on our website under Resources)

Acute Toxicity Oral - Category 4
Skin Corrosion/Irritation - Category 2
Eye Damage - Category 1
Skin Sensitization - Category 1
Carcinogenicity - Category 1A
Specific Target Organ Toxicity Single Exposure - Category 3
Specific Target Organ Toxicity Repeat Exposure - Category 1

### GHS LABEL ELEMENTS Symbol(s)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS RN | ACGIH TLV ($mg/m^3$) | OSHA-PEL ($mg/m^3$) |
|---|---|---|---|
| Silica fume | 69012-64-2 | 10 | NA |
| Carbon | 7440-44-0 | 10 | 5(R) 15(T) |

Silica Fume is amorphous silica powder for use in concrete and construction. Trace amount of elements may be detected due to the naturally variable chemical compositions of earth materials.

## SECTION 4: FIRST-AID MEASURES

**Eye Contact:** Rinse eyes thoroughly with water for at least 15 minutes, including under lids to remove all particles. Seek medical attention for discomfort or if irritation or other symptoms do not subside.

**Skin Contact:** Wash with water and pH neutral soap or a mild skin detergent Seek medical attention for rash, irritation, dermatitis and prolonged unprotected exposures to wet Silica Fume.

**Inhalation:** Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

**Ingestion:** Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control immediately.

## SECTION 5: FIRE-FIGHTING MEASURES

**Flashpoint & Method:** Non-combustible

**General Hazard:** Avoid breathing dust.

**Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Firefighting Equipment:** Silica Fume poses no fire-related hazard.

**Combustion Products:** NA

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**General:** Isolate in all directions. Place spilled material into a container. Avoid actions that cause the Silica Fume to become airborne. Avoid inhalation of Silica Fume and direct contact with skin. Wear appropriate Personal Protective Equipment (PPE) as described in Section 8 below.

**Waste Disposal:** Dispose of Silica Fume according to Federal, State, Provincial and local regulations.

## SECTION 7: HANDLING AND STORAGE

**General:** Handle with care and use appropriate control measures. Avoid dusting; ensure good ventilation during use

Properly ground all pneumatic conveyance systems. The potential exists for static build-up and static discharge when moving cement powders through a plastic, non- conductive, or non-grounded pneumatic conveyance system. The static discharge may result in damage to equipment and injury to workers.

Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck or other storage container or vessel that stores or contains Silica Fume. Silica Fume can build up or adhere to the walls of a confined space. The Silica Fume can suddenly release, collapse, or fall unexpectedly.

**Housekeeping:** Avoid actions that cause Silica Fume to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

**Storage Temperature:** Unlimited.

**Storage Pressure:** Unlimited.

**Storage Moisture:** Keep dry.

**Clothing:** Promptly remove and launder clothing that is dusty or wet with Silica Fume. Thoroughly wash skin after exposure to Silica Fume.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use local exhaust and general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

**Personal Protective Equipment (PPE):**

Respiratory Protection: Under ordinary, well ventilated circumstances no respiratory protection is required. If exposure levels are exceeded wear a NIOSH approved respirator that is properly fitted and is in good conditions.

Eye Protection: Wear ANSI approved glasses or safety goggles when handling dust or wet Silica Fume to prevent contact with eyes. Wearing contact lenses when using Silica Fume, under dusty conditions, is not recommended.

Skin protection: Gloves are recommended. Do not rely on barrier creams, in place of impervious gloves.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Physical State:** | Ultrafine grey powder | **pH (in water):** | NA |
| **Appearance:** | Gray | **Boiling Point:** | NA |
| **Odor:** | Odorless | **Freezing Point:** | None, solid |
| **Vapor Pressure:** | NA | **Viscosity:** | None, solid |
| **Vapor Density:** | NA | **Solubility in water:** | Insoluble to slightly insoluble |
| **Specific Gravity** | 2.2-2.3 | | |
| **Evaporation Rate:** | NA | | |

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable. Keep dry until use.

**Incompatibility:** Avoid contact with hydrofluoric (HF) acid

**Hazardous Polymerization:** Silica fume can react with Hydroflouric acid (HF) to form toxic gas ($SiF_4$).

**Hazardous Decompositions:** Will not spontaneously occur.

## SECTION 11 AND 12: TOXICOLOGICAL AND ECOLOGICAL INFORMATION

For questions regarding toxicological and ecological information refer to contact information in Section 1.

Silica fume is not characterized as hazardous to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers in compliance with Federal, State, Provincial and Local regulations.

## SECTION 14: TRANSPORT INFORMATION

This product is not classified as a Hazardous material under US D.O.T or Canadian TDG regulations.

## SECTION 15: REGULATORY INFORMATION

**OSHA/MSHA Hazard Communication:**
This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

**CERCLA/Superfund:** This product is not listed as a CERCLA hazardous substance.

**EPCRA SARA Title III:** This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a "hazardous substance" a delayed health hazard.

**EPRCA SARA Section 313:** This product does not contain any of the substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372

**California Proposition 65:**
WARNING: This material may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm

## SECTION 16: OTHER INFORMATION

**General Abbreviations**:

| | | | |
|---|---|---|---|
| > | Greater than | NIOSH | National Institute for Occupational Safety and Health |
| < | Lesser than | NTP | National Toxicology Program |
| ACGIH | American Conference of Governmental Industrial Hygienists | OSHA | Occupational Safety and Health Administration |
| CAS RN | Chemical Abstracts Reference Number | PEL | Permissible Exposure Limit |
| CERCLA | Comprehensive Environmental Response, Compensations and Liability Act | pH | Negative log of hydrogen ion |
| CFR | Code of Federal Regulations | PPE | Personal Protective Equipment |
| CL | Ceiling Limit | R | Respirable Particulate |
| DOT | Department of Transportation | RCRA | Resource Conservation and Reauthorization Act |
| $g/cm^3$ | Grams per cubic centimeter | SARA | Superfund Amendments and Reauthorization Act |
| HEPA | High-Efficiency Particulate Air | SDS | Safety Data Sheet |
| HMIS | Hazardous Materials Identification Systems | T | Total Particulate |
| IARC | International Agency for Research on Cancer | TDG | Transportation of Dangerous Goods |
| $mg/m^3$ | Milligrams per cubic meter | TLV | Threshold Limit Value |
| MSHA | Mine Safety and Health Administration | TWA | Time Weighted Average (8 hour) |
| NA | Not Applicable | WHMIS | Workplace Hazardous Materials Information System |
| NFPA | National Fire Protection Association | --- | ----- |

This SDS (Section 1-16) was revised on May 21, 2015.

An electronic version of this SDS is available at: www.dmicement.com

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