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Safety Data Sheet

Ground Silica - Crystalline Quartz

Product Codes: MUS40, SCS52

Section 1: Identification

Product identifier	Ground Silica - Crystalline Quartz
Product codes	MUS40; SCS52
Chemical name	Silicon dioxide; crystalline silica (quartz); ground silica; silica flour
CAS number	14808-60-7 (quartz)
Chemical formula	SiO2
Composition	Greater than 99% SiO2; typical product analysis approximately 99.5% SiO2.
Recommended use	Industrial mineral filler/extender and functional additive. Typical applications include paints and coatings, sealants, caulks, adhesives, epoxy and resin systems, plastics, rubber and silicone, polishes and cleansers, ceramics, glass/fiberglass, precision casting, countertops, and related industrial formulations.
Use restrictions	Do not use for abrasive blasting / sandblasting. Product is intended for industrial/technical applications; users must determine suitability and regulatory requirements for any specialized use.
Supplier / Distributor	Chemical Store Inc.
Address	1059 Main Avenue, Clifton, NJ 07011, United States
Telephone / Website / Email	+1 (973) 405-6248 | ChemicalStore.com | info@ChemicalStore.com
Emergency telephone	+1 (973) 420-4972 (United States)

Section 2: Hazards Identification

United States (US) - OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Classification	Carcinogenicity - Category 1A (inhalation of respirable crystalline silica). Specific Target Organ Toxicity - Repeated Exposure (STOT RE) - Category 1 (lungs, inhalation).
Signal word	DANGER
Pictogram	 GHS08 - Health hazard
Hazard statements	H350 - May cause cancer by inhalation. H372 - Causes damage to lungs through prolonged or repeated exposure by inhalation.
Primary route of concern	Inhalation of respirable crystalline silica dust.
Other hazards	Dust may cause mechanical/abrasive eye irritation and respiratory tract irritation. Respirable crystalline silica exposure can cause silicosis and is associated with other serious respiratory and systemic health effects.

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Precautionary statements

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves and eye protection; use respiratory protection when required by exposure conditions.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P501 - Dispose of contents/container in accordance with applicable local, state and federal regulations.

OSHA respirable crystalline silica standard: action level 25 micrograms/m3 and permissible exposure limit 50 micrograms/m3, each as an 8-hour TWA. The standard contains additional exposure assessment, engineering control, respiratory protection, housekeeping, medical surveillance, training, and recordkeeping requirements when applicable.

Section 3: Composition / Information on Ingredients

Component	CAS Number	% by Weight	Classification / Comments
Crystalline silica (quartz) / Silicon dioxide	14808-60-7	>99% (typical approx. 99.5%)	Carcinogen Category 1A; STOT RE Category 1 by inhalation for respirable crystalline silica exposure.
Minor naturally occurring mineral constituents	Various	<1% combined	Typical analyses include small amounts of Al2O3, Fe2O3, CaO, TiO2, MgO, Na2O and K2O; exact values vary by grade/lot.

Product-grade note: MUS40 and SCS52 are both high-purity natural crystalline quartz products. Their principal SDS hazards are governed by respirable crystalline silica; their particle-size distributions differ.

Section 4: First Aid Measures

Inhalation	Move person to fresh air. If respiratory irritation, coughing, wheezing, shortness of breath, or other symptoms develop, obtain medical attention. Significant or repeated exposure to respirable crystalline silica requires appropriate occupational medical evaluation.
Skin contact	Wash with soap and water. First aid is generally not required unless irritation occurs.
Eye contact	Rinse immediately with plenty of clean water. Do not rub eyes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Ingestion is not an expected significant route of occupational exposure. Obtain medical advice if a large amount is swallowed or symptoms occur.

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Most important symptoms/effects	Dust may cause abrasive eye injury and respiratory irritation. Prolonged or repeated inhalation of respirable crystalline silica can cause silicosis, progressive lung damage, and lung cancer.
Notes to physician	Treat symptomatically. Consider the duration and intensity of respirable crystalline silica exposure and applicable medical-surveillance requirements.

Section 5: Fire Fighting Measures

Suitable extinguishing media	Product is noncombustible. Use extinguishing media appropriate for the surrounding fire.
Unsuitable extinguishing media	None specific to silica.
Specific hazards	Ground silica is not flammable, combustible, or explosive.
Hazardous combustion products	None expected from silica itself.
Firefighter protection	Use protective equipment appropriate for the surrounding fire. Avoid generating airborne dust during post-fire cleanup.

Section 6: Accidental Release Measures

Personal precautions	Avoid generating or breathing airborne dust. Restrict access as needed. Wear appropriate eye protection and respiratory protection based on exposure conditions.
Environmental precautions	No special environmental precautions are normally required for uncontaminated silica; comply with local release-reporting requirements where applicable.
Containment / cleanup	Do not dry sweep or use compressed air if this can create airborne respirable dust. Use wet methods or a HEPA-filtered vacuum/collection system. Place collected material in closed containers. Avoid practices that disperse dust.

Section 7: Handling and Storage

Handling	Avoid generating dust. Do not breathe dust. Respirable crystalline silica can be present even when no visible dust cloud is observed. Use process enclosure, local exhaust ventilation, dust collection, wet methods, and good housekeeping as appropriate.
Housekeeping	Do not allow dust to accumulate. Avoid dry sweeping and compressed-air cleaning where these practices could contribute to employee exposure unless permitted under applicable OSHA requirements.
Storage	Keep containers closed and dry. Store bags/containers to prevent tearing, rupture, contamination, and unnecessary dust generation during loading or unloading.
Incompatible materials	Powerful oxidizers such as fluorine, chlorine trifluoride, and oxygen difluoride; hydrofluoric acid.
Prohibited / restricted use	Do not use for abrasive blasting / sandblasting.

Section 8: Exposure Controls / Personal Protection

Substance / Fraction	Limit	Authority / Basis
Respirable crystalline silica (quartz)	50 micrograms/m3 (0.05 mg/m3), 8-hour TWA PEL	OSHA 29 CFR 1910.1053
Respirable crystalline silica	25 micrograms/m3, 8-hour TWA action level	OSHA 29 CFR 1910.1053
Crystalline silica (respirable dust)	0.05 mg/m3 TWA	NIOSH REL; carcinogen designation

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Engineering controls: Use adequate local exhaust ventilation, enclosure, dust collection, wet methods, or other feasible engineering/work-practice controls to keep respirable crystalline silica exposure below applicable limits. Employers covered by 29 CFR 1910.1053 must follow the standard's applicable requirements.

Eye / face protection	Safety glasses with side shields or goggles where eye contact with dust is anticipated.
Skin protection	Normal work clothing and gloves as appropriate. Maintain good industrial hygiene.
Respiratory protection	When engineering and work-practice controls cannot maintain exposure below the applicable limit, use NIOSH-approved respiratory protection selected and used under a written respiratory protection program meeting 29 CFR 1910.134 and applicable silica-standard requirements.
Hygiene measures	Wash hands and face after handling and before eating, drinking, smoking, or leaving the work area. Do not eat, drink, or smoke in dusty handling areas. Clean dusty clothing using methods that minimize airborne dust.

Section 9: Physical and Chemical Properties

Property	MUS40 / General	SCS52 / General	Notes
Physical state	Fine solid powder	Fine solid powder	Ground natural crystalline quartz
Appearance / color	Bright white powder	Bright white powder	Natural mineral; minor shade variation possible
Odor	None	None	Odorless
pH, 5% suspension	Approx. 6.5	Approx. 7	Near neutral
Specific gravity	2.65	2.65	Quartz
Loose bulk density	Approx. 45 lb/ft3	Approx. 45 lb/ft3	Typical product data
Tapped bulk density	Approx. 78 lb/ft3	Approx. 78 lb/ft3	Typical product data
D10	Approx. 2 micrometers	Approx. 2.1 micrometers	Particle-size reference
D50	Approx. 10 micrometers	Approx. 14.7-15 micrometers	SCS52 grade number 52 is not its median size
D90	Approx. 25 micrometers	Approx. 44.3 micrometers	Particle-size reference
Water solubility	Insoluble	Insoluble	Quartz
Melting point	Approx. 1710 °C (3110 °F)	Approx. 1710 °C (3110 °F)	General quartz value
Boiling point	Approx. 2230 °C (4046 °F)	Approx. 2230 °C (4046 °F)	General quartz value
Flash point	Not applicable	Not applicable	Noncombustible
Vapor pressure	Approx. 0 / not applicable	Approx. 0 / not applicable	Solid
Flammability	Noncombustible	Noncombustible	Not flammable or explosive

Particle-size and bulk-density values are typical/reference values, not specifications. Natural mineral products can exhibit normal lot-to-lot variation. Confirm specification limits against the applicable Certificate of Analysis.

Section 10: Stability and Reactivity

Reactivity	Not reactive under normal conditions of use.
Chemical stability	Stable under normal ambient conditions.
Possibility of hazardous reactions	Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, or oxygen difluoride may cause fire/reaction.
Conditions to avoid	Avoid unnecessary dust generation. Heating quartz above approximately 870 °C can result in crystalline-phase transformation toward tridymite; at higher temperatures further transformation can occur.
Incompatible materials	Hydrofluoric acid; fluorine; chlorine trifluoride; oxygen difluoride; other powerful oxidizers.

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Hazardous decomposition / reaction products	Silica reacts/dissolves in hydrofluoric acid and may produce corrosive silicon tetrafluoride gas.

Section 11: Toxicological Information

Likely route of exposure	Inhalation of respirable dust is the principal health concern. Eye contact with particulates may cause abrasive irritation.
Acute inhalation effects	Dust may irritate the respiratory tract, causing cough, sore throat, nasal congestion, sneezing, wheezing, or shortness of breath.
Chronic respiratory effects	Prolonged or repeated inhalation of respirable crystalline silica can cause silicosis. Chronic, accelerated, and acute forms can occur depending on exposure concentration and duration; severe disease may be disabling or fatal.
Carcinogenicity	IARC classifies crystalline silica in the form of quartz or cristobalite dust as carcinogenic to humans (Group 1). NTP lists respirable-size crystalline silica as known to be a human carcinogen.
Other reported associations	Occupational crystalline silica exposure has been associated in the scientific literature with tuberculosis risk in persons with silicosis, autoimmune diseases, kidney disease, and non-malignant respiratory disease.
Acute oral toxicity	Quartz has low acute oral toxicity; a supplier SDS reports rat oral LD50 greater than 22,500 mg/kg.
Skin effects	No significant adverse effects expected from normal contact; dust may dry or mechanically irritate sensitive skin.
Eye effects	Particulates may cause abrasive/mechanical eye injury.
Target organ	Lungs / respiratory system with repeated inhalation exposure.

Section 12: Ecological Information

Ecotoxicity	Crystalline silica (quartz) is not known to be ecotoxic.
Persistence / degradability	Inorganic mineral; not degradable in the conventional biodegradation sense.
Bioaccumulative potential	Not expected to bioaccumulate.
Mobility in soil	Low mobility as an insoluble mineral particulate under ordinary conditions.
Other adverse effects	No specific adverse environmental effects identified for uncontaminated ground silica.

Section 13: Disposal Considerations

Product waste	Dispose of unused product, residue, and contaminated cleanup material in accordance with applicable federal, state, and local regulations. Uncontaminated silica is not generally classified as hazardous waste under RCRA, but contamination or process use may alter waste classification.
Packaging waste	Empty bags/containers may retain respirable dust. Handle and dispose of packaging in a manner that minimizes dust generation.

Section 14: Transport Information

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Mode	UN Number	Proper Shipping Name	Hazard Class	Packing Group
U.S. DOT	None / not regulated	Not regulated	None	None
TDG	Not regulated	Not applicable	None	None
IMDG	Not regulated	Not applicable	None	None
IATA/ICAO	Not regulated	Not applicable	None	None

Protect containers from rupture and prevent dust release during loading, unloading, and transport.

Section 15: Regulatory Information

OSHA	Respirable crystalline silica is specifically regulated under 29 CFR 1910.1053 for general industry and maritime and 29 CFR 1926.1153 for construction, as applicable.
TSCA	Crystalline silica (quartz), CAS 14808-60-7, is listed on the U.S. EPA TSCA Inventory.
CERCLA	Crystalline silica (quartz) is not identified as a CERCLA hazardous substance in the principal supplier SDS used for this document.
SARA 302 / 313	No components above applicable de minimis concentrations were identified by the principal supplier SDS as subject to SARA 302 or SARA 313 reporting.
California Proposition 65	Crystalline silica (airborne particles of respirable size) is listed by California as known to cause cancer.
IARC / NTP	IARC: Group 1 carcinogen for crystalline silica in the form of quartz or cristobalite dust. NTP: respirable crystalline silica is known to be a human carcinogen.
State / local requirements	Additional right-to-know, exposure, labeling, and workplace requirements may apply. Users are responsible for determining requirements applicable to their location and use.

Section 16: Other Information

Revision date	2026-10-03
Initial preparation date	2026-10-03
SDS version	1.0
Supersedes	No previous version for this combined MUS40/SCS52 SDS

Version	Date	Description
1.0	2026-10-03	Initial Chemical Store SDS for Ground Silica >99% SiO2 covering product codes MUS40 and SCS52.

Abbreviations and acronyms

Term	Meaning
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
OSHA	Occupational Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
PEL	Permissible Exposure Limit

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REL	Recommended Exposure Limit
TWA	Time-Weighted Average
STOT RE	Specific Target Organ Toxicity - Repeated Exposure
HEPA	High-Efficiency Particulate Air

Full text of hazard and precautionary statements

- H350 - May cause cancer by inhalation.
- H372 - Causes damage to lungs through prolonged or repeated exposure by inhalation.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
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- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P501 - Dispose of contents/container in accordance with applicable regulations.

Key literature and data sources

- U.S. Silica Company Safety Data Sheet: Silica Sand, Ground Silica and Fine Ground Silica (U.S. OSHA/GHS SDS).
- OSHA 29 CFR 1910.1053 - Respirable Crystalline Silica, including the 50 micrograms/m3 PEL and 25 micrograms/m3 action level.
- NIOSH Pocket Guide to Chemical Hazards - Silica, crystalline (as respirable dust), CAS 14808-60-7.
- IARC Monographs - crystalline silica in the form of quartz or cristobalite dust, Group 1 carcinogen.
- Chemical Store Product Data Sheet - Ground Silica MUS40.
- Chemical Store Product Data Sheet - Ground Silica SCS52 / SIL-CO-SIL 52.

Hazard classification method

Classification is based primarily on the U.S. Silica OSHA/GHS SDS for silica sand, ground silica and fine ground silica, supported by OSHA, NIOSH and IARC information. Product-specific physical and particle-size data for MUS40 and SCS52 are taken from Chemical Store's product data sheets. This SDS should be reviewed if future supplier composition or crystalline-silica content changes.

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Training advice

- Respirable crystalline silica hazard communication.
- Engineering controls and dust-minimizing work practices.
- Respiratory protection and fit testing where required.
- Housekeeping methods that do not create airborne dust.
- Medical surveillance and exposure monitoring where required by OSHA.
- Safe spill cleanup, storage, and disposal.

Disclaimer

The information provided in this Safety Data Sheet is believed to be accurate and represents the best information currently available from the sources identified above. However, no warranty, express or implied, is made regarding its accuracy, completeness, or suitability for any particular purpose. The user is responsible for determining the applicability of this information to the specific workplace, process, product lot, and use, and for compliance with all applicable laws and regulations.

Prepared By

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