SAFETY DATA SHEET
TECSIFLEX 920D

Issue date: October 21, 2025.

1. Product and Company Identification

Product Identification

Supplier Information

Product Name	Silica fume
Reference	TECSIFLEX 920D
Synonyms	Microsilica, Silica Fume
CAS No.	69012-64-2
EC No.	-
Molecular Formula	
Industry	Concrete additive, fiber cement, mortar, and refractory material

Company Name	TLA Group
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2. Hazards Identification

Classified as hazardous according to NOHSC criteria

Risk phrases	R/36,37,38 Irritating to eyes, the respiratory system, and skin. R/43 May cause sensitization by skin contact.
Safety phrases	S/22 Do not breathe dust. S/24/25 Avoid contact with skin and eyes. S/26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. S/37/S39 Wear suitable gloves and eye/face protection.

3. Composition / Information on Ingredients

Component	CAS No.	Concentration (% by weight)
Silica (amorphous)	69012-64-2	>92
Crystalline silica	14808-60-7	>0.1
Iron oxide (magnetite)	1309-38-2	<1.0

4. First Aid Measures

Description of first aid measures

Eye contact:	Avoid contact with eyes. Quickly and gently remove any dry powder by shaking or brushing. Rinse with large amounts of water for at least 15–20 minutes. Seek immediate medical attention.
Skin contact:	Continuously rinse the contaminated area with gently flowing warm water for at least 15–20 minutes. Remove contaminated clothing and wash it before reuse or discard it. If symptoms occur, seek immediate medical attention.
Ingestion:	Rinse the mouth with water and drink 1–2 glasses (240–300 ml) of water. Do not induce vomiting. If vomiting occurs naturally, lean the person forward to reduce the risk of aspiration. Do not give anything by mouth if the person is rapidly losing consciousness, unconscious, or convulsing. Seek immediate medical attention.
Inhalation:	Move the person to fresh air and seek immediate medical attention.
Protection of first aiders:	Ensure that medical personnel are informed of the substance involved and take measures to protect themselves and prevent secondary contamination.

5. Firefighting Measures

Extinguishing media

	Not applicable – the product is not combustible.
Specific hazards	Contact with water used for extinguishing produces an alkaline solution that may cause irritation.
Precautions for firefighters	Firefighters must wear full protective clothing and self-contained breathing apparatus.
Hazchem Code	Not applicable

6. Accidental Release Measures

Emergency procedures:	Prevent the spill from entering stormwater drainage and sewer systems.

Methods and materials for containment and cleanup:	Use dry cleanup procedures and avoid generating dust. Increase ventilation and wear full protective clothing along with appropriate respiratory protection. For cleanup, use an industrial vacuum cleaner or a suitable shovel. Place the collected material in plastic or metal drums with tightly sealed lids for final disposal.

7. Handling and Storage

PRECAUTIONS FOR HANDLING

Handling:	Avoid any handling that generates airborne dust.
Storage:	Store in closed containers. Keep away from hydrofluoric acid and fluorides.

8. Exposure Controls / Personal Protection

Exposure limits:

2.0 mg/m^3 NOHSC TWA – Silica (amorphous)
0.1 mg/m^3 NOHSC TWA – Silicon dioxide
Iron oxide: Not listed
CaMg carbonate (dolomite): Not listed

Recommendation:

Keep dust exposure as low as reasonably achievable.

Other information:

Repeated exposure to airborne dust may cause silicosis, a serious lung disease. The onset of silicosis is usually slow, and lung damage can occur even when no obvious symptoms or signs of disease are present. Exposure to respirable dust contained in this product should be avoided to prevent the risk of lung disease.

Engineering controls:

Use in well-ventilated areas. Keep airborne concentrations below the established exposure limits.

Personal protection:

It is recommended that the user wear rubber gloves, a class P1 or P2 particulate respirator, or an equivalent properly fitted dust mask, when not working in well-ventilated areas. In addition, wear snug-fitting safety goggles and long-sleeved, impermeable clothing to protect the skin from contact with the product. Additional safety measures may include an eyewash station, emergency shower, and sufficient ventilation volume and distribution to keep dust exposure below recommended levels.

9. Physical and Chemical Properties

Physical state	Ultrafine amorphous powder (respirable dust), forms agglomerates.
Color	Light gray to dark gray.
Odor	Odorless
Water solubility	Insoluble to slightly soluble

Melting point (°C)	Approximately 1230°C
Solubility in organic solvents	Insoluble to slightly soluble
Specific gravity (water=1)	2.2-2.3
Bulk density (kg/m^3) approx.:	300
Particle size (µm):	Approximately 0.3 µm.

10. Stability and Reactivity

Stability	Microsilica is stable and does not react with water.
Materials to avoid	Avoid contact with hydrofluoric acid and fluorides.
Hazardous reactions	Microsilica reacts with hydrofluoric acid (HF) to form toxic gas $(SiF)_4$.
Hazardous decomposition products:	Prolonged heating above 500°C (930°F) converts amorphous silica into crystalline phases.

11. Toxicological Information

Ingestion	Microsilica dust may irritate and dehydrate mucous membranes.
Inhalation	Microsilica dust may irritate and dehydrate mucous membranes.
Skin contact	Microsilica dust may cause irritation and dehydration.
Eye contact	Microsilica dust may cause irritation and dehydration.

Chronic effects:

Microsilica dust may contain crystalline quartz impurities (<0.5%). Inhalation of microsilica dust is considered to carry a minimal risk of pulmonary fibrosis (silicosis). However, cases of pulmonary fibrosis have been reported in workers exposed to amorphous silica in the ferrosilicon industry; these pulmonary changes have been transient or may have been due to simultaneous exposure to crystalline silica (quartz).

Heating microsilica above 500°C can result in the formation of crystalline modifications of SiO_2 (cristobalite/tridymite), which can cause silicosis. The rate of formation increases with rising temperature.

It is recommended that periodic medical examinations for persons exposed to the dust include: pulmonary evaluation, spirometry, and, if necessary, chest X-ray.

12. Ecological Information

Microsilica is not classified as hazardous to the environment.

13. Disposal Considerations

Product disposal	Reuse the product whenever possible. Dispose of microsilica waste in accordance with applicable federal, state, and local regulations for non-hazardous solid waste.
Container disposal	No special precautions are required during repackaging. Microsilica is not listed as a hazardous waste under RCRA (40 CFR 261).

14. Transport Information

Not classified as dangerous goods for road or rail transport.
UN Number: Not assigned
Proper shipping name: Not assigned
Class and subsidiary risk: Not applicable
Packing group: Not applicable
Special precautions for the user: No known restrictions for transport procedures
Hazchem Code: Not assigned

15. Regulatory Information

OSHA: Hazardous as defined by the Hazard Communication Standard (29 CFR 1910.1200).
TSCA (Toxic Substances Control Act): The components of this product are listed on the TSCA inventory.
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): Microsilica is not listed in 40 CFR 302.4.
RCRA (Resource Conservation and Recovery Act): Microsilica is not listed as a hazardous waste.
SARA Title III (Superfund Amendments and Reauthorization Act):

- Hazard categories 311/312: Immediate health hazard, delayed health hazard.
- Section 313 reportable ingredients: None.

California Proposition 65: This product contains chemicals known to the State of California to cause cancer: crystalline silica.

16. Other Information

Application of microsilica: For use in refractory compositions, concrete, and other systems containing hydraulic binders.

This Safety Data Sheet (SDS) has been prepared in accordance with the REACH Regulation.
The data included herein comes from authorized international databases and information provided by the company.
Other information is based on the current state of our knowledge. Every effort is made to ensure the accuracy of all information; however, due to the diversity of sources and the limitations of available technical knowledge, this document is provided solely as a reference for the user. The user must make their own judgment regarding the suitability of this information for their specific purposes.
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