

ResTec International Pty.Ltd.

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ResTec Silica Fume SDS

Issued by: ResTec

Date: ISSUED 14/05/2018

1. IDENTIFICATION

GHS Product Identifier

ResTec Silica Fume

Company Name

ResTec International Pty Ltd

Address

P.O. Box 3572 Loganholme

QLD 4129 Australia

Telephone/Fax Number

Tel: 0418 887 363

Emergency phone number

0418 887363 (9 - 5pm)

Recommended use of the chemical and restrictions on use

General building raw material additive / concrete additive.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Carcinogenicity category 1A

Signal Word (s)

DANGER

Hazard Statement (s)

H350 May cause cancer.

Pictogram (s)

Health hazard

Precautionary statement – Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P281 Use personal protective equipment as required.

Precautionary statement – Response

P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary statement – Storage

P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Silicon Dioxide(amorphous)	69012-64-2	>90 %
Aluminium oxide	1344-28-1	<5.0 %
Zirconium Dioxide	1314-23-4	<10.0 %
Iron As FeO ₂	1309-38-2	<3.0 %
Crystalline Silica	14808-60-7	<1 %

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products

Non-combustible material.

Specific Hazards Arising From The Chemical

This product is non-combustible.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid inhalation of dust, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

Zirconium Dioxide

TWA: 5 mg/m³ as Zr

Crystalline Silica

TWA: 0.1 mg/m³ (respirable dust)

Iron oxide fume (Fe₂O₃) (as Fe)

TWA: 5 mg/m³

Aluminium oxide

TWA: 10 mg/m³

Silicon Dioxide

TWA: 10 mg/m³ (respirable dust)

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter (such as P1 or P2) should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Powder	Appearance	Particulate powder
Colour	White	Odour	Odourless
Decomposition Temperature	Not available	Melting Point	Not applicable
Boiling Point	>1800°C	Solubility in Water	Insoluble in water, soluble in concentrated acids and alkalis.
Specific Gravity	2.21 (average)	pH	7.0 (10 wt% in distilled water)
Vapour Pressure	Not applicable	Vapour Density (Air=1)	Not applicable
Evaporation Rate	Not applicable	Odour Threshold	Not available
Viscosity	Not applicable	Partition Coefficient: n-octanol/water	Not applicable
Density	200-300 kg/m ³ (bulk)	Flash Point	Not applicable
Flammability	Non-combustible	Auto-Ignition Temperature	Not applicable
Explosion Limit - Upper	Not applicable	Explosion Limit - Lower	Not applicable
Explosion Properties	Not applicable		

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions of storage and handling.

Reactivity and Stability

Reacts with incompatible materials.

Conditions to Avoid

Dusty conditions. Moisture.

Incompatible materials

Hydrofluoric acid (HF).

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions

Reacts with hydrofluoric acid (HF) to produce toxic, gaseous silicon tetrafluoride (SiF₄).

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Inhalation of dusts may irritate the respiratory system. Chronic exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma. Onset and progression are related to dust concentrations and duration of exposure.

Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even after exposure has ceased, and may also lead to other diseases including heart disease and scleroderma.

Skin

Skin contact may cause mechanical irritation resulting in redness and itching.

Eye

Eye contact may cause mechanical irritation. May result in mild abrasion.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

May cause cancer by inhalation. Classified as a Known or presumed human carcinogen.

Respirable crystalline silica is classified by International Agency for Research on Cancer (IARC) as carcinogenic to humans by inhalation (Group 1).

Iron oxide is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No ecological data available for this material.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number

None Allocated

UN proper shipping name

None Allocated

Transport hazard class(es)

None Allocated

Special Precautions for User

Not available

IMDG Marine pollutant

No

Transport in Bulk

Not available

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS created: May 2018

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

END OF SDS