

SAFETY DATA SHEET

Fumed Silica

Revision Date: 20-Dec-2018

Revision Number: 2

1. Identification of the substance or mixture and of the supplier

1.1 Product Identifier

Product Name Fumed Silica

1.2 Other means of identification

Hazardous Material Number: HM550520

1.3 Recommendations and restriction on use of the substance or mixture

Recommended Use Additive

1.4 Supplier's details

Halliburton Energy Services
15th Floor, SunTowers
Building-B 123
10900 Bangkok, Thailand

Telephone Number: +66 2 2788100

For further information, please contact

E-mail Address fdunexchem@halliburton.com

1.5 Emergency phone number

+66 21056177
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

2.1 Classification of the substance or mixture

Not classified

2.2 Label elements

Not classified

Hazard Pictograms

Signal Word: None

Hazard Statements: Not Classified

Precautionary Statements

Prevention	None
Response	None
Storage	None
Disposal	None

**Contains
Substances**

CAS Number

Amorphous silica fume

69012-64-2

2.3 Other hazards which do not result in classification

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

3. Composition/information on Ingredients**3.1. Substances**

Substance

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Thailand
Amorphous silica fume	69012-64-2	60 - 100%	Not classified

4. First Aid Measures**4.1 Description of first-aid measures**

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Skin Wash with soap and water. Get medical attention if irritation persists.

Ingestion Under normal conditions, first aid procedures are not required.

4.2 Most important symptoms/effects, acute and delayed

No significant hazards expected.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically

5. Fire-fighting measures**5.1 Inappropriate and suitable fire extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture**Special exposure hazards in a fire**

Not applicable

5.3 Special protective equipment and precautions for fire-fighters**Special protective equipment for firefighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

See Section 8 for additional information

6.2 Environmental precautions

None known.

6.3 Methods and materials for containment and cleaning up

Scoop up and remove.

7. Handling and storage**7.1 Precautions for safe handling and storage**

Avoid creating or inhaling dust. Avoid contact with eyes, skin, or clothing. Ensure adequate ventilation. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage including any incompatibilities

Store in a cool, dry location. Product has a shelf life of 24 months.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure Limits

Substances	CAS Number	Thailand	ACGIH TLV-TWA
Amorphous silica fume	69012-64-2	Not available	Not available

8.2 Appropriate engineering controls

Engineering Controls

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

Hand Protection

Normal work gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

None known.

Environmental Exposure Controls

Do not allow material to contaminate ground water system

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State: Solid

Color: Gray

Odor: Odorless

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

6 - 9

Freezing Point / Range

No data available

Melting Point / Range

No data available

Pour Point / Range

No data available

Boiling Point / Range

No data available

Flash Point

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

2.2 - 2.5

Water Solubility

Insoluble in water

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

9.2 Other information

Molecular Weight

60.09

VOC Content (%)

No data available

Bulk Density

8 - 45 lb/ft³ / 128 - 720 kg/m³

10. Stability and reactivity

10.1 Reactivity

Not expected to be reactive.

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Will Not Occur

10.4 Conditions to avoid

None anticipated

10.5 Incompatible materials

Hydrofluoric acid.

10.6 Hazardous decomposition products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

11. Toxicological Information**11.1 Information on likely routes of exposure****Principle Route of Exposure** Eye or skin contact, inhalation.**11.2 Symptoms related to the physical, chemical and toxicological characteristics****Most Important Symptoms/Effects**

No significant hazards expected.

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure

Inhalation May cause mild respiratory irritation.
Eye Contact May cause mechanical irritation to eye.
Skin Contact None known.
Ingestion None known.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.4 Numerical measures of toxicity**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amorphous silica fume	69012-64-2	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	No data available

Substances	CAS Number	Skin corrosion/irritation
Amorphous silica fume	69012-64-2	Non-irritating to the skin (Rabbit) (similar substances)

Substances	CAS Number	Serious eye damage/irritation
Amorphous silica fume	69012-64-2	Non-irritating to the eye (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Amorphous silica fume	69012-64-2	No information available

Substances	CAS Number	Respiratory Sensitization
Amorphous silica fume	69012-64-2	No information available

Substances	CAS Number	Mutagenic Effects
Amorphous silica fume	69012-64-2	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects

Amorphous silica fume	69012-64-2	Did not show carcinogenic effects in animal experiments (similar substances)
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Substances	CAS Number	Reproductive toxicity
Amorphous silica fume	69012-64-2	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - single exposure
Amorphous silica fume	69012-64-2	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Amorphous silica fume	69012-64-2	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Amorphous silica fume	69012-64-2	Not applicable

12. Ecological Information

Ecotoxicity

12.1. Toxicity

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Amorphous silica fume	69012-64-2	No information available	LC50 (96h) > 10,000 mg/L (Brachydanio rerio) (similar substance)	No information available	No information available

12.2 Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Amorphous silica fume	69012-64-2	No information available

12.3 Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Amorphous silica fume	69012-64-2	No information available

12.4 Mobility in soil

Substances	CAS Number	Mobility
Amorphous silica fume	69012-64-2	No information available

12.5 Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal considerations

13.1 Disposal method

Disposal methods
Contaminated Packaging

Bury in a licensed landfill according to federal, state, and local regulations.
Follow all applicable national or local regulations.

14. Transport Information

14.1 Transportation information

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IMDG/IMO

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IATA/ICAO

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

14.2 Special precautions for user

None

15. Regulatory Information**International Agreements**

Montreal Protocol - Ozone Depleting Substances:	Does not apply.
Stockholm Convention - Persistent Organic Pollutants:	Does not apply
Rotterdam Convention - Prior Informed Consent:	Does not apply.
Basel Convention - Hazardous Waste:	Does not apply.

16. Other information

Revision Date: 20-Dec-2018

Revision Note**Reason for Revision**

SDS sections updated:

2

Key literature references and sources for data

www.ChemADVISOR.com/

NZ CCID

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight

CAS – Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC – European Commission

EC10 – Effective Concentration 10%

EC50 – Effective Concentration 50%

EEC – European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%

LL50 – Lethal Loading 50%

MARPOL – International Convention for the Prevention of Pollution from Ships

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NOEC – No Observed Effect Concentration

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic

PC – Chemical Product category

PEL – Permissible Exposure Limit

ppm – parts per million

PROC – Process category

REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL – Short Term Exposure Limit

Disclaimer Statement

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End of Safety Data Sheet