

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Name: Ferrosilicon

CAS #: 8049-17-0

Relevant identified uses of the substance: Scientific research and development

Supplier details:

Stanford Advanced Materials

E-mail: sales@samaterials.com

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification Of The Substance Or Mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 (CLP)

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

The substance is not classified as hazardous according to the CLP regulation.

2.1.2 Classification according to Directive 67/548/EEC & Directive 1999/45/EC – N/A

Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the “General Classification

guideline for preparations of the EU” in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label Elements

2.2.1 Label Elements According to Regulation (EC) No. 1272/2008 (CLP)

This product does not have a classification according to the CLP regulation.

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

HazardPictogram(s)

Not regulated Signal

Word(s)

Not regulated

Hazard-determining components of labelling: None

Hazard

Statement(s)

Not regulated

Hazard description:

WHMISsymbols:

None

NFPA ratings

(scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings

(scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS Long

Term Health

Hazard

Substances

Substance is not listed

2.3 Other Hazards

Results of PBT

and vPvB

assessment

PBT: N/A

vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

CAS # / Substance Name

8049-17-0 Ferrosilicon

Identification number(s)

EC number: 617-088-7

SECTION 4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Information: No special measures required.

If inhaled: Supply fresh air; consult doctor in case of complaints.

In case of skin contact: Brush off loose particles from skin. Wash with soap and water. If skin irritation

is

experienced, consult a doctor.

In case of eye contact: Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. If swallowed: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

4.2 Most Important

Symptoms And
Effects, Both Acute
And Delayed

Slight irritant effect on eyes. Gastric or intestinal disorders when ingested. Nausea in case of ingestion.

Hazards No data available

4.3 Indication Of The Immediate Medical

Attention And Special
Treatment Needed

No data available

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing

Media

Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable Extinguishing

Media

None.

5.2 Special Hazards Arising

From The Substance Or

Mixture

No data available

5.3 Advice for Fire-Fighters Wear self-contained respiratory protective device. Wear fully protective suit.

Additional Information No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions,
Protective Equipment And
Emergency Procedures

Avoid formation of dust. For large spills, use respiratory protective device against the effects of fumes/dust/aerosol. For large spills, wear protective clothing. Ensure adequate ventilation.

6.2 Environmental Precautions Do not allow to enter sewers/ surface or groundwater.

6.3 Methods And Material For
Containment And Cleaning Up

Pick up mechanically. Dispose contaminated material as waste according to item 13.

6.4 Reference To Other Sections See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1

Precautions For Safe
Handling

Use only in well ventilated areas. Prevent formation of dust. Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water. Any unavoidable deposit of dust must be regularly removed.

Information About

Fire – and explosion

protection

No special measures required.

7.2 Conditions For Safe Storage, Including Any Incompatibilities:

Requirements to be

Met by Storerooms

and Receptacles:

Store in a cool location. Protect from humidity and water.

Information About

Storage in One

Common Storage

Facility:

Store away from oxidizing agents. Store away from foodstuffs. Do not store together with acids.

Further information

about storage

conditions:

Store in cool, dry conditions in well sealed receptacles.

7.3 Specific End Use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Ferrosilicon 8049-17-0 PEL (USA) Long-term value: 15 (total), 5 (resp.) mg/m³

DNELs No data available

PNECs No data available

Additional information: The lists valid during the making were used as basis.

8.2 Exposure Controls

8.2.2 Personal Protective Equipment:

General protective and hygienic measures:

General

protective and

hygienic

measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Immediately remove all soiled and contaminated clothing. Do not inhale dust / smoke / mist. Avoid contact with the eyes. Avoid close or long term contact with the skin.

Respiratory

Protection

Not required under normal conditions of use. For spills, respiratory protection maybe advisable. Use suitable respiratory protective device when high concentrations are present.

Eye Protection Wear safety glasses

Protection of

Hands

Wear protective gloves.

Body Protection Not required under normal conditions of use.

Protection may be required for spills.

Risk Management

Measures

No special requirements.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information On Basic Physical And Chemical Properties

Appearance Granulate Color Grey

Odor Odorless Odor Threshold (ppm) Not available

Melting Point (°C) /

Freezing Point (°C)

4892 °F/ 2700 °C Boiling Point/Boiling Range (°C) Not available

Flash Point (°C) No Data Explosive Limit Ranges Not available

Auto Ignition

Temperature (°C)

Not available Decomposition Temperature (°C) Not available

Explosive Properties None Oxidizing Properties Not available

Flammability (Solid, Gas) Not available Ph (Value) Not available

Evaporation Rate N/A Vapor Pressure (mm Hg) Not available

Vapor Density (Air=1) N/A Density (g/ml) 6,7 g/cm

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Solubility (Water) Insoluble Solubility (Other) Not available

Partition Coefficient (NOctanol/

Water)

Not available Viscosity (mPa.s) Not available

9.2 Other Information Volatile Organic Chemical (VOC) Content – Not Available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical Stability

Thermal Decomposition / conditions

to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of Hazardous Reactions Reacts with strong acids and alkali. Reacts with strong oxidising agents.

10.4 Conditions To Avoid Store away from oxidising agents. Moisture.

10.5 Incompatible Materials No data available

10.6 Hazardous Decomposition Product(s) Possible in traces.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Primary Irritant Effect:

On the skin: Slight irritant effect on skin and mucous membranes.

On the eye: Slight irritant effect on eyes.

Sensitisation: No sensitizing effects known.

Additional toxicological

information:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us. The substance is not subject to classification according to the latest version of the EU lists.

Acute effects (acute toxicity, irritation and corrosivity):

Inhalation may cause irritation to the respiratory system.

Repeated dose toxicity: Repeated exposure may result in skin sensitivity.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No data available

12.2 Persistence and Degradability No data available

12.3 Bioaccumulative Potential No data available

12.4 Mobility in Soil No data available

Additional ecological information: Not known to be hazardous to water.

12.5 Results of PBT and vPvB

Assessment

PBT: N/A

vPvB: N/A

12.6 Other Adverse Effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Recommendation Smaller quantities can be disposed of with household waste. Contact waste processors for recycling information. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned Packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

Land Transport (ADR/RID) (c)(d) Land Transport (Within USA) (b)(d)

UN Number None UN Number None

Proper Shipping Name Not classified as dangerous for transport.

Proper Shipping Name

Not classified as dangerous for transport.

Transport Hazard Class(es) None Transport Hazard Class(es) None

Packing Group None Packing Group None

Hazard Label(s) None Hazard Label(s) None

Environmental Hazards None Environmental Hazards None

Special Precautions For User None Special Precautions For User None

Sea Transport (IMDG) (c) Air Transport (ICAO/IATA) (c) (d)

UN Number None UN Number None

Proper Shipping Name

Not classified as

dangerous for transport.

Proper Shipping Name

Not classified as dangerous for

transport.

Transport Hazard Class(es) None Transport Hazard Class(es) None

Packing Group None Packing Group None

Marine Pollutant None Marine Pollutant None

Special Precautions For User None Special Precautions For User None

(b)- ORM-D may be applicable within the USA for package sizes less than 30kg.

(c)- Consult with transport provider.

(d)- Check relevant regulations for Special Provisions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15. REGULATORY INFORMATION

15.1 Safety, Health And Environmental Regulations/Legislation Specific For The Substance Or Mixture

USA

SARA

Section 355 (extremely hazardous substances)

Substance is not listed.

Section 313 (Specific toxic chemical listings) Substance is not listed.

TSCA (Toxic Substance Control Act) Not all ingredients listed.

Proposition 65 (California):

Chemicals known to cause cancer: Substance is not listed.

Chemicals known to cause reproductive
toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive
toxicity for males:

Substance is not listed.

Chemicals known to cause developmental
toxicity:

Substance is not listed.

Carcinogenic Categories

EPA (Environmental Protection Agency) Substance is not listed.

IARC (International Agency for Research on
Cancer)

Substance is not listed. TLV (Threshold Limit Value established by
ACGIH)

Substance is not listed.

MAK (German Maximum Workplace
Concentration)

Substance is not listed.

NIOSH-Ca (National Institute for
Occupational Safety and Health)

Substance is not listed.

Canada

Canadian Domestic Substances List (DSL) Substance is listed.

Canadian Ingredient Disclosure list (limit
0.1%)

Substance is not listed.

Canada Ingredient Disclosure list (limit 1%) Substance is listed.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC)

according to REACH, Article 57

Substance is not listed.

15.2 Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.