



Technologies Inc.

# SAFETY DATA SHEET

Silicon Carbide (SiC) Whisker/Fiber/Microfiber Aqueous Dispersion

Revision: 7; Revision Date: December 6, 2016

## **SECTION 1: IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY**

### **1.1 Product identifiers**

Commercial product name(s): Silar® Silicon Carbide Whisker Dispersion in Water: All Designations  
SI-TUFF™ Performance Silicon Carbide Microfiber Dispersion in Water: All Designations  
SI-TUFF™ Performance Silicon Carbide Fiber Dispersion in Water: All Designations  
SI-TUFF™ Engineered Fiber and Microfiber Blends Dispersed in Water: All Designations

Generic name: Silicon Carbide Dispersed in Water

REACH No. A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

CAS No. See Section 3

### **1.2 Relevant identified uses of the substance or mixture, and uses advised against**

Used for the manufacture of substances.

### **1.3 Details of the supplier of the safety data sheet**

Company: Haydale Technologies Inc.  
1446 South Buncombe Road  
Greer, SC 29651, USA

Telephone: +1-864-877-0123

Fax: +1-864-879-6615

E-mail address: info@haydale-technologies.com

## **SECTION 2: HAZARDS IDENTIFICATION**

### **2.1 Classification of the substance or mixture**

This product is not classified as a hazardous substance or mixture. This product does not need to be labelled as hazardous.

### **2.2 Label elements**

This product does not need to be labelled in accordance with EC directives or respective national laws.

### **2.3 Other hazards**

None known.

## **SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

### **3.1 Substances**

Definition according to EC directive: Water, Silicon Carbide, Viscosity Modifiers (where applicable)

CAS No.: 7732-18-5 (water); 409-21-2 (silicon carbide)

EINECS No.: 231-791-2 (water); 206-991-8 (silicon carbide)

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## **SECTION 4: FIRST AID MEASURES**

### **4.1 Description of first aid measures**

Inhalation:	No special action required for dispersion used as intended.
Skin contact:	Not expected to present a significant skin hazard under anticipated conditions of normal use, but, if irritation or rash occurs, seek medical attention for symptomatic treatment.
Eye contact:	In case of eye irritation due to contact with material, immediately rinse with copious quantities of clean water, occasionally lifting upper and lower eyelids, until no evidence of material remains (approximately 15-20 minutes). If symptoms persist, such as pain, blinking, tears, or redness, seek medical attention.
Ingestion:	Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

### **4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in section 11.

### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1 Extinguishing media**

Dispersed product is not flammable. Use extinguishing measures appropriate for the source of the fire.

### **5.2 Special hazards arising from the substance or mixture**

None known for aqueous dispersion.

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Prevent drying to avoid dust formation.

### **6.2 Environmental precautions**

No special measures required.

### **6.3 Methods and material for containment and cleaning up**

Wet down spillage, pick-up mechanically, and dispose of according to national, regional, and local regulations.

### **6.4 Reference to other sections**

For personal protection see section 8. For disposal see section 13.

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Prevent drying to avoid dust formation. Store in a sealed container.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in tightly sealed containers in a clean, secure area. Identify the contents of all containers. No known incompatibilities.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

General protection and hygiene measures: Observe general industrial hygiene practice. Prevent drying to avoid dust formation.

Respiratory protection: None required for aqueous dispersion product used as intended.

Hand protection: Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene, and wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, using toilet facilities, or leaving work.

Eye/face protection: Use protective goggles to prevent contact with eyes. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Environmental exposure controls: No data available.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

(a) Appearance:	Particulate/fibers dispersed in water. Variable color, typically gray-green.
(b) Odor:	Odorless.
(c) Odor threshold:	Not applicable.
(d) pH:	Nominal 7.0.
(e) Melting point / freezing point:	Equivalent to water.
(f) Initial boiling point and boiling range:	Equivalent to water.
(g) Flash point:	Not flammable by conventional test methods.
(h) Evaporation rate:	Equivalent to water.
(i) Flammability (solid, gas):	Not flammable.
(j) Upper/lower flammability or explosive limits:	Not applicable.
(k) Vapor pressure:	Equivalent to water.
(l) Vapor density:	Equivalent to water.
(m) Relative density:	1.32 for aqueous dispersion of 35wt% silicon carbide in water.
(n) Water solubility:	Material is a dispersion of insoluble particles/fibers in water.
(o) Partition coefficient: n-octanol/water:	Silicon carbide is insoluble in both water and n-octanol.
(p) Auto-ignition temperature:	Not applicable.
(q) Decomposition temperature:	Not applicable.
(r) Viscosity:	No data available.
(s) Explosive properties:	Not applicable.
(t) Oxidizing properties:	Not applicable.

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

This material is stable. No hazardous reactions known.

### 10.2 Chemical stability

This material is stable. No hazardous reactions known.

### 10.3 Possibility of hazardous reactions

Not applicable.

### 10.4 Conditions to avoid

Not applicable.

### 10.5 Incompatible materials

Not applicable.

### 10.6 Hazardous decomposition products

None known.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

(a) Acute toxicity            Not applicable for aqueous dispersion product used as intended.  
LD50 for dry silicon carbide powder is > 2.000 mg/kg

(b) Skin  
corrosion/irritation:        No data available.

(c) Serious eye  
damage/irritation:        No data available.

(d) Respiratory or skin  
sensitization:            No data available.

(e) Germ cell  
mutagenicity                No data available.

(f) Carcinogenicity:        Not applicable.

(g) Reproductive  
toxicity:                    No data available.

(h) STOT-single  
exposure:                    No data available.

(i) STOT-repeated  
exposure:                    No data available.

(j) Aspiration hazard:      No data available.

Further toxicological  
information:                Silicon carbide is not bioactive and not known to absorb into living tissues. Silicon carbide is not sensitizing and is non-toxic by oral ingestion.

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available.

### 12.2 Persistence and degradability

No data available.

### 12.3 Bio accumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product disposal: Spillage or unused materials should be disposed in accordance with national, regional, and local solid waste regulations.

Contaminated packaging: Containers should be tightly sealed to prevent drying and subsequent airborne emissions during transportation and at the disposal site. It is recommended that containers be externally labeled to indicate that container should remain sealed.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN Number

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### 14.3 Transport hazard class(es)

Not dangerous goods.

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## **14.4 Packing group**

Not dangerous goods.

## **14.5 Environmental hazards**

None known.

## **14.6 Special precautions for user**

No data available.

## **SECTION 15: REGULATORY INFORMATION**

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No data available.

### **15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

## **SECTION 16: OTHER INFORMATION**

This information covers the safety requirements of the product(s) exclusively and is based on current knowledge and experience. This safety information should be used for information purposes only, and does not represent a guarantee for properties of the described product(s) in terms of any legal warranty. Haydale Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.