

SECTION 1. IDENTIFICATION

Product identifier used on the label Silicon Carbide, SC-30 and SC-35 Graphite Loaded Direct Fired Silicon Carbide (Fired)

Other means of identification SC-30 Direct Fired Silicon Carbide, SC-35 Graphite Loaded Direct Fired Silicon Carbide

Code Not available

RECOMMENDED USE AND RESTRICTIONS

Identified uses Wear resistant, corrosion resistant, temperature resistant products.

Supplier's details CoorsTek, Inc.
16000 Table Mountain Parkway Golden, CO 80403
Phone: +1 303 271 7000
Fax: +1 303 271 7009

Emergency telephone number +1 303 271 7000
(with hours of operation) 7:00 AM - 4:00 PM MST

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture Not classified

GHS LABEL ELEMENTS

Signal word No signal word

Hazard statements No known significant effects or critical hazards

PRECAUTIONARY STATEMENTS

General Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention Not applicable

Response Not applicable

Storage Not applicable

Disposal Not applicable

Other hazards which do not result in classification None known

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Other means of identification SC-30 Direct Fired Silicon Carbide, SC-35 Graphite Loaded Direct Fired Silicon Carbide

CAS NUMBER/OTHER IDENTIFIERS

CAS number Not applicable

EC number Mixture

Product code Not available

Ingredient name	%	CAS Number
Graphite	1 - 5	7782-42-5
Silicon Carbide (non fibrous)	60 - 100	409-21-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES
DESCRIPTION OF NECESSARY FIRST AID MEASURES

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

SECTION 4. FIRST AID MEASURES CONTINUED
**MOST IMPORTANT SYMPTOMS/EFFECTS,
ACUTE AND DELAYED**

Potential acute health effects No known significant effects or critical hazards

Eye contact No known significant effects or critical hazards

Inhalation No known significant effects or critical hazards

Skin contact No known significant effects or critical hazards

Ingestion No known significant effects or critical hazards

OVER-EXPOSURE SIGNS/SYMPTOMS

Eye contact No known significant effects or critical hazards

Inhalation No known significant effects or critical hazards

Skin contact No known significant effects or critical hazards

Ingestion No known significant effects or critical hazards

**INDICATION OF IMMEDIATE MEDICAL
ATTENTION AND SPECIAL TREATMENT
NEEDED, IF NECESSARY**

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled

Specific treatments No specific treatment

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES
EXTINGUISHING MEDIA

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known

Specific hazards arising from the chemical No specific fire or explosion hazard

Hazardous thermal decomposition products Decomposition products may include the following materials:

- carbon dioxide
- carbon monoxide
- metal oxide/oxides

Special protective actions for fire-fighters No special protection is required

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES
PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES

For non-emergency personnel No special measures are required

For emergency responders No special measures are required

Environmental precautions No special measures are required

METHODS & MATERIALS FOR CONTAINMENT AND CLEANING UP

Spill Place in a designated, labeled waste container taking into consideration any contamination that may be on the filter as a result of use.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Store in a cool, clean environment. Handle an open container with care. See Section 10 for further details.

**CONTROL PARAMETERS
OCCUPATIONAL EXPOSURE LIMITS**

Ingredient Name	Exposure Limits
Silicon Carbide	<p>ACGIH TLV (United States, 3/2012). TWA: 0.1 f/cc 8 hours. Form: Fibrous TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction TWA: 3 mg/m³ 8 hours. Form: Respirable fraction</p> <p>NIOSH REL (United States, 6/2009). TWA: 5 mg/m³ 10 hours. Form: Respirable fraction</p> <p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
Boron carbide	<p>OSHA PEL (United States). TWA: 15 mg/m³ Form: Inhalable dust TWA: 5 mg/m³ Form: Respirable dust</p> <p>ACGIH TLV (United States). TWA: 10 mg/m³ Form: Inhalable dust TWA: 3 mg/m³ Form: Respirable dust</p>
Graphite	<p>ACGIH TLV (United States, 3/2012). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction</p> <p>NIOSH REL (United States, 6/2009). TWA: 2.5 mg/m³ 10 hours. Form: Respirable fraction</p> <p>OSHA PEL Z3 (United States, 9/2005). TWA: 15 mppcf 8 hours.</p>

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Recommended monitoring procedures** If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation, or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Environmental exposure controls** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

INDIVIDUAL PROTECTION MEASURES

- Hygiene measures** Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.
- Eye/face protection** Safety glasses with side-shields
- SKIN PROTECTION**
- Hand protection** Protective gloves
- Body protection** Lab coat or equivalent
- Other skin protection** Suitable protective footwear
- Respiratory protection** A respirator is not needed under normal and intended conditions of product use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
APPEARANCE

- Physical state** Solid
- Color** Black
- Odor** None
- Odor threshold** Not available
- pH** Not available
- Melting point/freezing point** 2700°C (4892°F)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES CONTINUED

Boiling point/boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	3.1
Solubility	Negligible solubility in water
Partition coefficient: n- octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
SADT	Not available
Viscosity	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Possibility of hazardous reactions
Conditions to avoid	Under normal conditions of storage and use, hazardous reactions will not occur.
Incompatible materials	No specific data
Hazardous decomposition products	Reactive or incompatible with the following materials: oxidizing materials. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11. TOXICOLOGICAL INFORMATION
INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity There is no data available

IRRITATION/CORROSION

Skin There is no data available

Eyes There is no data available

Respiratory There is no data available

SENSITIZATION

Skin There is no data available

Respiratory There is no data available

Mutagenicity There is no data available

Carcinogenicity There is no data available

Reproductive toxicity There is no data available

Teratogenicity There is no data available

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organ
Graphite	Category 3	Not Applicable	Respiratory Tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available

Aspiration hazard

There is no data available

Information on the likely routes of exposure

Not available.

POTENTIAL ACUTE HEALTH EFFECTS

Eye contact No known significant effects or critical hazards

Inhalation No known significant effects or critical hazards

Skin contact No known significant effects or critical hazards

Ingestion No known significant effects or critical hazards

SECTION 11. TOXICOLOGICAL INFORMATION CONTINUED
SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE
SHORT TERM EXPOSURE

Potential immediate effects	No known significant effects or critical hazards
Potential delayed effects	No known significant effects or critical hazards

LONG TERM EXPOSURE

Potential immediate effects	No known significant effects or critical hazards
Potential delayed effects	No known significant effects or critical hazards

POTENTIAL CHRONIC HEALTH EFFECTS

General	No known significant effects or critical hazards
Carcinogenicity	No known significant effects or critical hazards
Mutagenicity	No known significant effects or critical hazards
Teratogenicity	No known significant effects or critical hazards
Developmental effects	No known significant effects or critical hazards
Fertility effects	No known significant effects or critical hazards

NUMERICAL MEASURES OF TOXICITY

Acute toxicity estimates	No known significant effects or critical hazards
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SECTION 12. ECOLOGICAL INFORMATION

Toxicity There is no data available

Persistence and degradability There is no data available

Bioaccumulative potential There is no data available

MOBILITY IN SOIL

Soil/water partition coefficient (K_{oc}) There is no data available

Other adverse effects No known significant effects or critical hazards

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

SECTION 14. TRANSPORT INFORMATION

	DOT	IMDG	IATA
UN Number	Not regulated	Not regulated	Not regulated
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No	No	No
Special precautions for user	-	-	-
Additional information	-	-	-

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available

SECTION 15. REGULATORY INFORMATION
Safety, health and environmental regulations specific for the product

No known specific national and/or regional regulations applicable to this product (including its ingredients).

U.S. Federal regulations

TSCA 8(a) IUR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted
SARA 302/304/311/312 extremely hazardous substances: No products were found
SARA 302/304 emergency planning and notification: No products were found
SARA 302/304/311/312 hazardous chemicals: Silicon carbide; Graphite
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
 Silicon carbide: Immediate (acute) health hazard; Graphite: Immediate (acute) health hazard

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)

Not listed

Clean Air Act Section 602 Class I Substances

Not listed

Clean Air Act Section 602 Class II Substances

Not listed

DEA List I Chemicals (Precursor Chemicals)

Not listed

DEA List II Chemicals (Essential Chemicals)

Not listed

STATE REGULATIONS
Massachusetts

The following components are listed: Silicon carbide; Graphite

New York

None of the components are listed

New Jersey

The following components are listed: Silicon carbide; Graphite

Pennsylvania

The following components are listed: Silicon carbide; Graphite

California Prop. 65

No products were found

SECTION 16. OTHER INFORMATION
HISTORY

Date of issue mm/dd/yyyy 10/15/2012

Version 1

Prepared by KMK Regulatory Services Inc.

Classification	Justification
Not Classified	

Key to abbreviations

ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

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