

**Safety Data Sheet**

According to OSHA Communication Standard, 29 CFR 1910.1200

Flow Control**SECTION 1: Identification****Product identifier****Product name:** Flow Control**Product code:** 802010010, 802040035, 802100000**Recommended use of the product and restriction on use****Relevant identified uses:** Additive for cement-based products.**Uses advised against:** Not determined or not applicable.**Reasons why uses advised against:** Not determined or not applicable.**Manufacturer or supplier details****Manufacturer:****United States**

CTS Cement Manufacturing Corporation

12442 Knott St.

Garden Grove, CA 92841

800-929-3030

info@ctscement.com

Emergency telephone number:**United States**

INFOTRAC 1-800-535-5053

International

INFOTRAC 1-352-323-3500

SECTION 2: Hazard(s) identification**GHS classification:**

Combustible Dust

Label elements**Signal word:** Warning**Hazard statements:**

May form combustible dust concentration in air.

Hazards not otherwise classified:

The product is under certain conditions capable of dust explosion.

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7631-86-9	Silicon dioxide	5.0≤x≤10.0



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Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First aid measures

Description of first aid measures

General notes:

Remove contaminated clothing.

After inhalation:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

After skin contact:

Wash thoroughly with soap and water. If irritation develops, seek medical attention.

After eye contact:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.

After swallowing:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Acute and delayed symptoms and effects:

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Information on: Silicon dioxide

Symptoms: Overexposure may cause: rhinitis, irritation of the mucous membranes, irritates the eyes and respiratory tract, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Immediate medical attention and special

Notes for the physician and specific treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Dry powder, foam.

Unsuitable extinguishing media:

Carbon dioxide.

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

Specific hazards during fire-fighting:

Harmful vapors. Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment for firefighters:

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Avoid dust formation. Use personal protective clothing.

Environmental precautions:

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up:

For small amounts: Pick up with suitable appliance and dispose of. Dispose of contaminated material as prescribed. For large amounts: Pick up with suitable appliance and dispose of. Dispose of absorbed material in accordance with regulations. Avoid raising dust.

Reference to other sections:

For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage**Precautions for safe handling:**

Closed containers should only be opened in well-ventilated areas. Protection against fire and explosion: Dust can form an explosive mixture with air.

Conditions for safe storage, including any incompatibilities:

No applicable information available. Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Avoid all sources of ignition: heat, sparks, open flame. Protect from temperatures above: 40 degrees C. The packed product must be protected against exceeding the indicated temperature.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Silicon dioxide

OSHA Z3:	TWA value 20 millions of particles per cubic foot of air
OSHA Z3:	TWA value 0.8 mg/m ³ ; The exposure limit is calculated from the equation, 80mg/m ³ /(%SiO ₂), using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
ACGIH, US:	TWA value 10 mg/m ³ Inhalable particles;
ACGIH, US:	TWA value 3 mg/m ³ Respirable particles;
OSHA, Z3:	TWA value 15 mg/m ³ total dust;
OSHA, Z3:	TWA value 5 mg/m ³ Respirable fraction;
OSHA, Z3:	TWA value 50 million of particles per cubic foot of air Total dust;
OSHA, Z3:	TWA value 15 millions of particles per cubic foot of air Respirable fraction;

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No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protection equipment**Eye and face protection:**

Safety glasses with side-shields. Wear face shield if splashing hazard exists.

Skin and body protection:

Select glove material impermeable and resistant to the substance. Wear appropriate clothing to prevent any possibility of skin contact. Nitrile, butyl rubber or neoprene gloves are recommended.

Respiratory protection:

Wear a NIOSH-certified (or equivalent) particulate respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134)

General hygienic measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	Solid; yellow powder
Odor	Odorless to musty
Odor threshold	Not available
pH	6.5-8.5
Melting point/freezing point	The substance decomposes therefore not determined.
Initial boiling point/range	Not applicable
Flash point (closed cup)	Not available
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability/explosive limit	Not available
Lower flammability/explosive limit	Not available
Vapor pressure	Not applicable
Vapor density	Not applicable
Bulk Density	300 – 600 kg/m ³

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Relative density	1.84 at 20°C
Solubilities	Soluble
Partition coefficient (n-octanol/water)	Not available
Auto/Self-ignition temperature	(360°C) The product has not been tested. The statement has been derived from substances of a similar structure or composition. (155°C) Data for powdery solid. No self ignition was observed up to the specified temperature.
Decomposition temperature	Not determined.
Dynamic viscosity	Not applicable
Kinematic viscosity	Not applicable
Explosive properties	Not available
Oxidizing properties	Not available

Other information

VOC (Weight %)	0 g/l when mixed with water
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SECTION 10: Stability and reactivity**Reactivity:**

Does not react under normal conditions of use and storage. Corrosive effects on metal are not anticipated. Not fire-propagating. Minimum ignition energy: 30-100 mJ, Inductivity: 1 mH, Grain size distribution: <63 µm

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

Dust explosion hazard.

Conditions to avoid:

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. See SDS section 7 - Handling and storage.

Incompatible materials:

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

Hazardous decomposition products:

Decomposition products: Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated. Thermal decomposition: not determined.

SECTION 11: Toxicological information**Information on toxicological effects:****Acute toxicity**

Assessment: Virtually non-toxic after a single ingestion. Based on available data, the classification criteria are not met.



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Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

The product has not been tested. The statement has been derived from the properties of the individual components.

Inhalation

Type of value: LC50

Species: rat

Exposure time: 4 h
not determined

Dermal

Type of value: LD50

Species: rat

not determined

Skin corrosion/irritation

Assessment: No irritation is expected under intended use and appropriate handling. Based on the available data, the classification criteria are not met.

Skin

Species: rabbit

Result: non-irritant

The product has not been tested. The statement has been derived from the properties of the individual components.

Eye

Species: rabbit

Result: non-irritant

The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory or skin sensitization

Assessment: No sensitizing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Species: guinea pig

Result: Non-sensitizing

Method: OECD Guideline 406

The product has been tested. The statement has been derived from the properties of the individual components.

Aspiration Hazard: Not applicable.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity. Based on available data, the classification criteria are not met.



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Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Teratogenicity

Assessment of teratogenicity: Based on the ingredients, there is no suspicion of a teratogenic effect.

SECTION 12: Ecological information

Aquatic toxicity

Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

LC50 (96 h) > 10-100 mg/l, Fish

The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic invertebrates

LC50 (48 h), daphnia (other)
not determined

Aquatic plants

EC50 (72 h), algae (other)
not determined

Chronic toxicity to fish

No data available.

Chronic toxicity to aquatic invertebrates

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Other bacteria/EC50 (0.5 h):
not determined

Persistence and degradability

Assessment biodegradation and elimination (H20)

Not readily biodegradable (by OECD criteria)

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No data available.

Mobility in soilAssessment transport between environmental compartments

No data available.

SECTION 13: Disposal considerations**Disposal methods:**

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state, and local regulations. Recommend crushing, puncturing, or other means to prevent unauthorized use of used containers.

SECTION 14: Transport information**United States Transportation of dangerous goods (49 CFR DOT)**

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None



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SECTION 15: Regulatory information

United States regulations Inventory listing (TSCA): All components are on the U.S. EPA TSCA Inventory List.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 311/312 hazardous: Refer to SDS section 2 for GHS hazard classes applicable for this product.

SARA Section 313 substances: None of the ingredients are listed

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

California Proposition 65: Not listed/Not Regulated.

SECTION 16: Other information

Abbreviations and Acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Road Transport
AU: Australia
CA: Canada
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CN: China
CPR: Controlled Products Regulations
DFG: Deutsche Forschungsgemeinschaft
DOT: Department of Transportation
DSL: Domestic Substances List
EEC: European Economic Community
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances
EPA: Environmental Protection Agency
EU: European Association
IARC: International Agency for Research on Cancer
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
JP: Japan
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor

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LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon
Know: Octanol/water partition coefficient
KR: Korea
LEL: Lower Explosive Limit
UEL: Upper Explosive Limit
NIOSH: National Institute for Occupational Safety and Health Administration
PH: Philippines
RCRA: Resource Conservation and Recovery Act
OSHA: Occupational Safety and Health Administration
RID: European Rail Transport
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Transportation of Dangerous Goods
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average
US: United States

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-1-0**Initial preparation date:** 11/01/18**Version #:** 5**Revision Date:** 07/30/24**End of Safety Data Sheet**