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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.

Labeling of special preparations (GHS):

Contains formaldehyde. This product is capable of releasing formaldehyde into the air. May cause cancer.

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SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 50-00-0	Formaldehyde	<0.02

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: Formaldehyde
Symptoms: Overexposure may cause:, respiratory disorders, headache, coughing, lung oedema

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.

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Unsuitable extinguishing media:
Carbon dioxide.

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.

Special precautions:
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:
Breathing must be protected when large quantities are decanted without local exhaust ventilation.
Protection against fire and explosion: Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Conditions for safe storage, including any incompatibilities:
No applicable information available. Suitable materials for containers: High density polyethylene (HDPE). Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

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SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Formaldehyde	ACGIH, US:	STEL value 0.3 ppm ;
	ACGIH, US:	TWA value 0.1 ppm ;
	OSHA, US:	STEL value 2 ppm ;
	OSHA, US:	OSHA Action level 0.5 ppm ;
	OSHA, US:	TWA value 0.75 ppm ;

Biological limit values:

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; white powder
Odor	Odorless to musty
Odor threshold	Not available
pH	9-11.4
Melting point/freezing point	Not available

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Initial boiling point/range	Not applicable
Flash point (closed cup)	Not available
Evaporation rate	Not applicable
Flammability (solid, gas)	Combustile dust
Upper flammability/explosive limit	Not available
Lower flammability/explosive limit	Not available
Vapor pressure	Not applicable
Vapor density	Not applicable
Bulk Density	500 – 800 kg/m^3
Relative density	1.84 at 20°C
Solubilities	Soluble
Partition coefficient (n-octanol/water)	Not available
Auto/Self-ignition temperature	1238°F (670°C) Auto; 446°F (230°C) Self Ignition
Decomposition temperature	Not available
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

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. The product is not capable of a dust explosion.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions.

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:

Possible separation of formaldehyde in small quantities., The substances/substance groups mentioned are formed by hydrolysis. Possible thermal decomposition products: ammonia, carbon oxides, sulfur oxides, nitrous gases, and cyanides.

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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.

Product data: No data is available.

Substance data:

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.

Product data: No data is available.

Substance data:

Name	Result
Citric Acid	Dust may irritate skin.

Serious eye damage/irritation

Assessment: Non-irritant. The product has not been tested. The statement has been derived from the properties of the individual components.

Product data: No data is available.

Substance data:

Name	Result
Citric Acid	Causes serious eye damage.

Respiratory or skin sensitization

Assessment: A sensitizing effect on particularly sensitive individuals cannot be excluded.

Product data: No data is available.

Substance data: No data is available.

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Carcinogenicity

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

Product data: No data is available.

Substance data: No data is available.

International Agency for Research on Cancer (IARC): Formaldehyde.

The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to occurrence of nasopharyngeal cancer and leukemia. Current regulatory information is provided in this SDS. No adverse health effects are anticipated if recommended personal protective equipment and industrial hygiene practices are used.

National Toxicology Program (NTP): Formadehyde. Listed Carcinogen.

Occupational Safety and Health Administration (OSHA): Formaldehyde. Listed Carcinogen.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data is available.

Substance data: No data is available.

Reproductive toxicity

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

Product data: No data is available.

Substance data: No data is available.

Specific target organ toxicity (single exposure)

Assessment: Based on the available information there is no specific target organ toxicity to be expected after a single exposure. The product has not been tested. The statement has been derived from the properties of the individual components.

Product data: No data is available.

Substance data: No data is available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data is available.

Substance data: No data is available.

Information on likely routes of exposure:

No data is available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data is available.

Other information:

Prolonged inhalation may be harmful.

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SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Persistence and degradability

Assessment: Not readily biodegradable (by OECD criteria)

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects:

Aquatic toxicity
Assessment of aquatic toxicity:
Based on available data, the classification criteria are not met. There is a high probability that the product is not acutely harmful to aquatic organisms.

Toxicity to fish
LC50 (96 h), Fish (other)
not determined

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.

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Microorganisms/Effect on activated sludge

Toxicity to microorganisms
Other bacteria/EC50 (0.5 h):
not determined

SECTION 13: Disposal considerations

Disposal methods:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities.

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.

Massachusetts Right to Know:

50-00-0	Formaldehyde	Listed

New Jersey Right to Know:

50-00-0	Formaldehyde	Listed

New York Right to Know:

50-00-0	Formaldehyde	Listed

Pennsylvania Right to Know:

50-00-0	Formaldehyde	Listed

California Proposition 65: Not listed/Not Regulated.

⚠ **WARNING:** Cancer – www.P65Warning.ca.gov.

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

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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 Reach 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
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.

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End of Safety Data Sheet