**Safety Data Sheet**

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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

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**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.
Safety Data Sheet

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Identification</th>
<th>Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 50-00-0</td>
<td>Formaldehyde</td>
<td>&lt;0.02</td>
</tr>
</tbody>
</table>

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.
Flow Control

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.

Flow Control

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid; white powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless to musty</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>9-11.4</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Flow Control

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point/range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point (closed cup)</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible dust</td>
</tr>
<tr>
<td>Upper flammability/explosive limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower flammability/explosive limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>500 – 800 kg/m³</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.84 at 20°C</td>
</tr>
<tr>
<td>Solubilities</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature</td>
<td>1238°F (670°C) Auto; 446°F (230°C) Self Ignition</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>0 g/l when mixed with water</td>
</tr>
</tbody>
</table>

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.
**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:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>Dust may irritate skin.</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

**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.
Flow Control

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.
### 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.
Flow Control

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)

<table>
<thead>
<tr>
<th>UN number</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN transport hazard class(es)</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None</td>
</tr>
</tbody>
</table>

International Maritime Dangerous Goods (IMDG)

<table>
<thead>
<tr>
<th>UN number</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN transport hazard class(es)</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>UN number</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN transport hazard class(es)</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>Listed</td>
</tr>
</tbody>
</table>

New Jersey Right to Know:

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>Listed</td>
</tr>
</tbody>
</table>

New York Right to Know:

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>Listed</td>
</tr>
</tbody>
</table>

Pennsylvania Right to Know:

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>Listed</td>
</tr>
</tbody>
</table>

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
**Safety Data Sheet**  

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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>CN</td>
<td>China</td>
</tr>
<tr>
<td>CPR</td>
<td>Controlled Products Regulations</td>
</tr>
<tr>
<td>DFG</td>
<td>Deutsche Forschungsgemeinschaft</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>DSL</td>
<td>Domestic Substances List</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>ECHA</td>
<td>European Chemicals Agency</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>EU</td>
<td>European Association</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Reach on Cancer</td>
</tr>
<tr>
<td>IMDG</td>
<td>International maritime dangerous goods code</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>JP</td>
<td>Japan</td>
</tr>
<tr>
<td>COD</td>
<td>Chemical Oxygen Demand</td>
</tr>
<tr>
<td>BOD5</td>
<td>5-day biochemical oxygen demand</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50</td>
</tr>
<tr>
<td>CL50</td>
<td>Lethal Concentration 50</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective concentration 50</td>
</tr>
<tr>
<td>Log-POW</td>
<td>Octanol-water partition coefficient</td>
</tr>
<tr>
<td>Koc</td>
<td>Partition coefficient of organic carbon</td>
</tr>
<tr>
<td>Know</td>
<td>Octanol/water partition coefficient</td>
</tr>
<tr>
<td>KR</td>
<td>Korea</td>
</tr>
<tr>
<td>LEL</td>
<td>Lower Explosive Limit</td>
</tr>
<tr>
<td>UEL</td>
<td>Upper Explosive Limit</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PH</td>
<td>Philippines</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>RID</td>
<td>European Rail Transport</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>TDG</td>
<td>Transportation of Dangerous Goods</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
</tbody>
</table>

**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 #:** 3  
**Revision Date:** 04/18/22

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End of Safety Data Sheet