**Section 1 - PRODUCT AND COMPANY IDENTIFICATION**

**Material Name:** CADMIUM FLUOBORATE  

**Manufacturer Information**  
BASSTECH INTERNATIONAL LLC  
400 Kelby St.  
Fort Lee, NJ 07024  
Phone: (201) 569-8686  
Fax: (201) 569-7511  
Email: info@basstechintl.com  
Emergency #: CHEMTREC: 800-424-9300

**Chemical Family**  
inorganic, salt, aqueous

**Synonyms**  
BORATE(1-), TETRAFLUORO-, CADMIUM (2:1); BORATE(1-), TETRAFLUORO-, CADMIUM; CADMIUM TETRAFLUOROBORATE(1-) (2:1); CADMIUM TETRAFLUOROBORATE(1-); CADMIUM TETRAFLUOROBORATE; CADMIUM FLUOBORATE SOLUTION; CADMIUM FLUOROBORATE; TETRAFLUOROBORATE(1-), CADMIUM (2:1); B2CDF8; RTECS: EV0525000

**Section 2 - HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**  
**Color:** colorless  
**Physical Form:** liquid  
**Odor:** odorless  
**Health Hazards:** kidney damage, cancer hazard (in humans)

**POTENTIAL HEALTH EFFECTS**

**Inhalation**  
**Short Term:** irritation, difficulty breathing, headache, dizziness, nausea, vomiting, diarrhea, chest and stomach pain, lung damage, liver damage, kidney damage  
**Long Term:** difficulty breathing, lung damage, blood disorders, kidney damage, liver damage, nerve damage, cancer

**Skin**  
**Short Term:** irritation  
**Long Term:** no information is available

**Eye**  
**Short Term:** irritation  
**Long Term:** no information is available

**Ingestion**  
**Short Term:** nausea, vomiting, diarrhea, blurred vision, headache, dizziness, liver damage, kidney damage  
**Long Term:** same as effects reported in long term inhalation
**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
<th>Symbol(s)</th>
<th>Risk Phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>WATER 231-791-2</td>
<td>50.0</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>14486-19-2</td>
<td>CADMIUM FLUOBORATE 238-490-5</td>
<td>50.0</td>
<td>Xn N</td>
<td>R:20/21/22-50/53</td>
</tr>
</tbody>
</table>

**Component Related Regulatory Information**

This product may be regulated, have exposure limits or other information identified as the following: Fluorides, Cadmium inorganic compounds, Cadmium compounds, Cadmium salts.

**Section 4 - FIRST AID MEASURES**

**Inhalation**
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

**Skin**
Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

**Eyes**
Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

**Ingestion**
If a large amount is swallowed, get medical attention.

**Antidote**
calcium disodium edetate/dextrose, intravenous; calcium disodium edetate/procaine, intramuscular.

**Section 5 - FIRE FIGHTING MEASURES**

See Section 9 for Flammability Properties

**NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Flammable Properties**
Negligible fire hazard.

**Extinguishing Media**
Use extinguishing agents appropriate for surrounding fire.

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Water Release**

**Occupational spill/release**
Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Keep unnecessary people away, isolate hazard area and deny entry.

**Section 7 - HANDLING AND STORAGE**

**Storage Procedures**
Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a tightly closed container. See original container for storage recommendations. Keep separated from incompatible substances.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Component Exposure Limits**

**CADMIUM FLUOBORATE (14486-19-2)**

- ACGIH: 2.5 mg/m³ TWA (as F, related to Fluorides)
- OSHA: 2.5 mg/m³ TWA (as F); 2.5 mg/m³ TWA (dust, related to Fluorides)
- OSHA (Vacated): 2.5 mg/m³ TWA (related to Fluorides)

**Biological Limit Values**
Biological Limit Values have not developed for any of component(s) of this material.

**IDLH**
9 mg/m³

**Ventilation**
Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes/Face**
Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Protective Clothing**
Wear appropriate chemical resistant clothing.

**Glove Recommendations**

**Protective Materials**
rubber

**Respiratory Protection**
The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
OSHA Standard:

NIOSH Recommendations:
At any detectable concentration -
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Escape -
Any air-purifying, full-facepiece respirator equipped with an N100, R100, or P100 filter.
Any appropriate escape-type, self-contained breathing apparatus.

** **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES** **

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>odorless</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density (air = 1):</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity (water = 1):</td>
<td>1.60</td>
</tr>
<tr>
<td>Coeff. Water/Oil Dist.:</td>
<td>Not available</td>
</tr>
<tr>
<td>Volatility:</td>
<td>Not available</td>
</tr>
<tr>
<td>Molecular Formula:</td>
<td>(B-F4)2-Cd</td>
</tr>
</tbody>
</table>

| Appearance: | Not available |
| Physical Form: | liquid |
| Odor Threshold: | Not available |
| Melting Point: | Not available |
| Flash Point: | No data available |
| Vapor Pressure: | Not available |
| Density: | Not available |
| Water Solubility: | soluble |
| Viscosity: | Not available |
| Molecular Weight: | 286.01 |

Solvent Solubility
Soluble: ethanol

** **Section 10 - STABILITY AND REACTIVITY** **

Chemical Stability
Stable at normal temperatures and pressure.

Conditions to Avoid
None reported.

Materials to Avoid
No data available.

Decomposition Products
oxides of cadmium, halogenated compounds

Possibility of Hazardous Reactions
Will not polymerize.
**Section 11 - TOXICOLOGICAL INFORMATION**

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.

RTECS Acute Toxicity (selected)
The components of this material have been reviewed, and RTECS publishes the following endpoints:
WATER (7732-18-5)
Oral: >90 mL/kg Oral Rat LD50

Component Carcinogenicity
CADMIUM FLUOBORATE (14486-19-2)
ACGIH: A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)
IARC: Monograph 100C [2012]; Monograph 58 [1993]; Supplement 7 [1987] (evaluated as a group)
(related to Cadmium compounds)
OSHA: Present (related to Cadmium compounds)
NTP: Known Human Carcinogen (related to Cadmium compounds)
DFG: Category 1 (causes cancer in man, related to Cadmium inorganic compounds)

RTECS Irritation
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Target Organs
CADMIUM FLUOBORATE (14486-19-2)
kidneys

Medical Conditions Aggravated by Exposure
kidney disorders, respiratory disorders

RTECS Tumorigenic
No data available.

RTECS Mutagenic
No data available.

RTECS Reproductive Effects
No data available.

**Section 12 - ECOLOGICAL INFORMATION**

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.

**Section 13 - DISPOSAL CONSIDERATIONS**

Disposal Methods
Dispose in accordance with all applicable regulations. Hazardous Waste Number(s): D006. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 1.0 mg/L.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.
**Section 14 - TRANSPORT INFORMATION**

**US DOT Information**
- Shipping Name: Cadmium compounds
- UN/NA #: UN2570
- Hazard Class: 6.1
- Packing Group: III
- Required Label(s): 6.1

**Component Marine Pollutants**
This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>DOT regulated severe marine pollutant (related to Cadmium compounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADMIUM FLUOBORATE</td>
<td>14486-19-2</td>
<td></td>
</tr>
</tbody>
</table>

**TDG Information**
- No Classification assigned.

**ADR Information**
- No Classification assigned.

**RID Information**
- No Classification assigned.

**IATA Information**
- No Classification assigned.

**ICAO Information**
- No Classification assigned.

**IMDG Information**
- No Classification assigned.

**Section 15 - REGULATORY INFORMATION**

**U.S. Federal Regulations**
This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

**CADMIUM FLUOBORATE (14486-19-2)**
- SARA 313: 0.1 % de minimis concentration (related to Cadmium compounds)

**SARA 311/312**
- Acute Health: Yes
- Chronic Health: Yes
- Fire: No
- Pressure: No
- Reactive: No
U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADMIUM FLUOBORATE (related to: Fluorides)</td>
<td>14486-19-2</td>
<td>Yes¹</td>
<td>No</td>
<td>Yes¹</td>
<td>Yes¹</td>
<td>Yes¹</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.

Canadian Regulations
Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

CADMIUM FLUOBORATE (14486-19-2)
1%

EU Marking and Labelling
Symbols
Xn Harmful
N Dangerous for the environment

Risk Phrases
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Germany Water Classification
No components of this material are listed.

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>US</th>
<th>CA</th>
<th>EU</th>
<th>AU</th>
<th>JP</th>
<th>KR</th>
<th>CN</th>
<th>NZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADMIUM FLUOBORATE</td>
<td>14486-19-2</td>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Material Name: CADMIUM FLUOBORATE

**Section 16 - OTHER INFORMATION**

Component Analysis

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other Information

Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Material Safety Data Sheet before handling product.

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