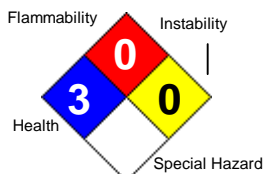




<b>HEALTH</b>	*	3
<b>FLAMMABILITY</b>	0	
<b>PHYSICAL</b>	0	
<b>PPE</b>	<b>X</b>	



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## 1. Product and Company Identification

**Product Code:** 5070

**Product Name:** SIFCO Process Solution Cadmium LHE

**Manufacturer Information**

**Company Name:** SIFCO Applied Surface Concepts  
Division of SIFCO Industries, Inc.  
5708 E. Schaaf Road  
Independence, OH 44131

**Phone Number:** (216)524-0099

**Fax Number:** (216)524-6331

**Emergency Contact:** CHEMTREC (United States) (800)424-9300

**Information:** CHEMTREC ( International-Collect) +1 (703)527-3887

**Web site address:** <http://www.SIFCOASC.com>

**Email address:** [info@sifcoasc.com](mailto:info@sifcoasc.com)

## 2. Hazards Identification

### Emergency Overview

Light yellow liquid with no characteristic odor.

Danger! Toxic. Harmful by inhalation, in contact with skin and if swallowed. Causes burns. May cause sensitisation by inhalation and skin contact. May cause cancer. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Severe Marine Pollutant. Emergency Response

Guidebook #154

**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes

### Potential Health Effects (Acute and Chronic)

**EYE:** Causes eye irritation, burns possible.

**SKIN CONTACT:** Causes skin irritation, may cause burns and possible allergic reaction.

**INHALATION:** May cause sneezing, nasal discharge, coughing, headaches, dizziness, nausea, fatigue or difficulty in breathing. May cause sensitization of respiratory tract.

**INGESTION:** Irritating to mouth, throat, and stomach. May cause liver damage with jaundice, kidney and gastrointestinal damage.

**CHRONIC EFFECTS:** Prolonged or repeated exposure may cause damage to skin, eyes, respiratory system and teeth. May cause severe and delayed health effects such as inflammation of the lungs and chemical bronchitis. May increase possibility of prostate cancer.

### Signs and Symptoms Of Exposure

Dependant on route(s) of entry. See section above for details.

### Medical Conditions Generally Aggravated By Exposure

Preexisting skin and eye conditions; respiratory system disorders; preexisting sensitization to ethylenediamine.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	Formula	RTECS #
1. Borate(1-), tetrafluoro-, cadmium (2:1)	14486-19-2	20.0 -30.0 %	BF4.1/2Cd	EV0525000
2. Ethylenediamine	107-15-3	10.0 -20.0 %	C2H8N2	KH8575000
3. Water	7732-18-5	50.0 -70.0 %	H2O	ZC0110000

### 4. First Aid Measures

#### Emergency and First Aid Procedures

First aid providers must take proper precautions for their own safety before entering contaminated areas to assist chemical accident victims and handling their contaminated clothing and equipment. Another person should immediately call the Emergency Medical Service, 911-Operator, Hospital, Physician, Ophthalmologist or Poison Control Center, as applicable. Give the following information: Location of the accident, your phone number, description of the accident, name of chemical agent and product, number and condition of casualties, what is being done for the victims. Stay on the phone until the other party hangs up! Remove victim from contaminated area to a clean, quiet, ventilated area. Calm and reassure him, keep him warm.

EYES: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly decontaminate (or discard) clothing and shoes.

INHALATION: Remove to fresh air. Lay victim down, legs raised. Loosen tight clothing, cover with a blanket. If not breathing, give artificial respiration.

INGESTION: DO NOT induce vomiting, unless advised by EMS. Give large quantities of water to drink. Never give anything by mouth to an unconscious person.

### 5. Fire Fighting Measures

<b>Flammability Classification:</b>	Material Will Not Burn		
<b>Flash Pt:</b>	NA		
<b>Explosive Limits:</b>	LEL: None	UEL: None	
<b>Autoignition Pt:</b>	NA		

#### Fire Fighting Instructions

Use NIOSH/MSHA approved positive-pressure self-contained breathing apparatus. Structural fire fighters' protective clothing may not provide adequate protection.

#### Flammable Properties and Hazards

Specific Hazards: Toxic gases/vapors/fumes of Carbon monoxide (CO). Carbon dioxide (CO2).

Containers can build up pressure and burst if exposed to heat (fire). Water runoff can cause environmental damage. Dike area for later disposal.

#### Hazardous Combustion Products

#### Suitable Extinguishing Media

All

#### Unsuitable Extinguishing Media

### 6. Accidental Release Measures

#### Steps To Be Taken In Case Material Is Released Or Spilled

Do not touch or walk through spilled material. Isolate hazard area and keep people away. Notify your facility emergency coordinator. Eliminate all sources of ignition. Provide maximum ventilation. Do not release into soil, sewers, or natural bodies of water. Wear proper personal protective equipment (PPE). Carefully mop up or vacuum spill and triple rinse with water into suitable plastic container. Release of a reportable quantity (RQ) requires notification of proper authorities. Dispose of according to local, state, and federal regulations.

## 7. Handling and Storage

### Precautions To Be Taken in Handling

#### USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Avoid breathing vapours. Use with adequate exhaust ventilation. Use approved respirator if air contamination is above accepted level. Thoroughly wash hands. Triple rinse container clean before discarding. Put nothing else in this container.

### Precautions To Be Taken in Storing

Keep container tightly closed in upright position. Store at 60-90°F away from incompatible materials and physical hazards. Do not remove or deface container labels.

## 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Borate(1-), tetrafluoro-, cadmium (2:1)	14486-19-2	0.005 mg/m <sup>3</sup>	0.002 mg/m <sup>3</sup>	
2. Ethylenediamine	107-15-3	10 PPM	10 ppm	25 mg/m <sup>3</sup>
3. Water	7732-18-5			

### Respiratory Equipment (Specify Type)

If engineering controls are not feasible, the respiratory protection program must comply with OSHA 29 CFR 1910.134.

### Eye Protection

Face shield and safety glasses w/side shields or splash-proof chemical goggles. Do not wear contact lenses. Eye wash station, safety shower, washing facilities near work area.

### Protective Gloves

Nitrile, neoprene, vinyl, latex gloves. Impervious boots, apron, protective clothing as required by job conditions.

### Other Protective Clothing

### Engineering Controls (Ventilation etc.)

Local exhaust ventilation is required to meet the permissible exposure limits (PEL) during the use of this product.

### Work/Hygienic/Maintenance Practices

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

## 9. Physical and Chemical Properties

Physical States:	[ ] Gas	[ X ] Liquid	[ ] Solid
Freezing Point:	<= 32.00 F (0.0 C)		
Boiling Point:	>= 212.00 F (100.0 C)		
Autoignition Pt:	NA		
Flash Pt:	NA		
Explosive Limits:	LEL: None	UEL: None	
Specific Gravity (Water = 1):	1.250 - 1.260		
Vapor Pressure (vs. Air or mm Hg):			
Vapor Density (vs. Air = 1):			
Evaporation Rate (vs Butyl Acetate=1):	< 1		
Solubility in Water:	Complete		
Percent Volatile:	N.A.		

**pH:** 7.5 - 7.9**Appearance and Odor**

Light yellow liquid with no characteristic odor.

**10. Stability and Reactivity****Stability:** Unstable [ ] Stable [ X ]**Conditions To Avoid - Instability**

Stable under normal ambient conditions.

**Incompatibility - Materials To Avoid**

Strong acids, oxidizers.

**Hazardous Decomposition Or Byproducts**

Nitrous Oxides, Carbon Oxides, Diatomic Flourine, Cadmium

**Possibility of Hazardous Reactions:** Will occur [ ] Will not occur [ X ]**Conditions To Avoid - Hazardous Reactions**

Avoid contact with acids and oxidising substances.

**11. Toxicological Information**

Not Available

**Chronic Toxicological Effects****Carcinogenicity/Other Information**

ACGIH Known Human Carcinogen (Class A)

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Borate(1-), tetrafluoro-, cadmium (2:1)	14486-19-2	Known	1	A2	Yes
2. Ethylenediamine	107-15-3			A4	
3. Water	7732-18-5				

**Carcinogenicity:** NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes**12. Ecological Information**

Not Available

**13. Disposal Considerations****Waste Disposal Method**

Ship to approved treatment/disposal facility. Dispose of according to local, state, and federal regulations. Follow the applicable regulations for disposal of empty containers and rinsate. The disposal information applies to the material as manufactured. Contamination may affect the disposal requirements. The responsibility for proper waste disposal is with the generator of the waste.

**RCRA Waste ID Code:** D006**Additional Disposal Information**

D002

**14. Transport Information****LAND TRANSPORT (US DOT)**

**DOT Proper Shipping Name** UN2922, Corrosive Liquid, Toxic, n.o.s.  
(Cadmium Fluoroborate, Ethylenediamine) 8,6.1, PG II - ERG 154

**DOT Hazard Class:** 8,6.1

**DOT Hazard Label:** CORROSIVE, POISON

**UN/NA Number:** UN2922

**Packing Group:** II

### AIR TRANSPORT (ICAO/IATA)

**UN Number:** 2922  
**Hazard Class:** 8,6.1 - CORROSIVE, POISON  
**Packing Group:** II  
**IATA Classification:** 8,6.1

### MARINE TRANSPORT (IMDG/IMO)

**UN Number:** 2922  
**Hazard Class:** 8,6.1 - CORROSIVE, POISON  
**Packing Group:** II  
**Marine Pollutant:** Yes - Serious

### Additional Transport Information

## 15. Regulatory Information

### US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Borate(1-), tetrafluoro-, cadmium (2:1)	14486-19-2	No	No	No	No
2. Ethylenediamine	107-15-3	Yes 10000 LB	Yes 5000 LB	No	No
3. Water	7732-18-5	No	No	No	No

### US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Borate(1-), tetrafluoro-, cadmium (2:1)	14486-19-2	HAP, ODC ()	No	Inventory	No
2. Ethylenediamine	107-15-3	HAP, ODC ()	Yes	Inventory	No
3. Water	7732-18-5	HAP, ODC ()	No	Inventory	No

### SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

<b>Sec.302:</b>	EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
<b>Sec.304:</b>	EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
<b>Sec.313:</b>	EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
<b>Sec.110:</b>	EPA SARA 110 Superfund Site Priority Contaminant List

### TSCA (Toxic Substances Control Act) Lists:

<b>Inventory:</b>	Chemical Listed in the TSCA Inventory.
<b>5A(2):</b>	Chemical Subject to Significant New Rules (SNURS)
<b>6A:</b>	Commercial Chemical Control Rules
<b>8A:</b>	Toxic Substances Subject To Information Rules on Production
<b>8A CAIR:</b>	Comprehensive Assessment Information Rules - (CAIR)
<b>8A PAIR:</b>	Preliminary Assessment Information Rules - (PAIR)
<b>8C:</b>	Records of Allegations of Significant Adverse Reactions
<b>8D:</b>	Health and Safety Data Reporting Rules
<b>8D TERM:</b>	Health and Safety Data Reporting Rule Terminations
<b>12(b):</b>	Notice of Export

**Other Important Lists:**

<b>CWA NPDES:</b>	EPA Clean Water Act NPDES Permit Chemical
<b>CAA HAP:</b>	EPA Clean Air Act Hazardous Air Pollutant
<b>CAA ODC:</b>	EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
<b>CA PROP 65:</b>	California Proposition 65

**International Regulatory Lists:**

**EPA Hazard Categories:**

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

☒ Yes ☐ No Acute (immediate) Health Hazard  
☒ Yes ☐ No Chronic (delayed) Health Hazard  
☐ Yes ☒ No Fire Hazard  
☐ Yes ☒ No Sudden Release of Pressure Hazard  
☐ Yes ☒ No Reactive Hazard

**Regulatory Information**

**U.S. FEDERAL REGULATIONS:**

**1. Supplier Notification about toxic Chemicals.**

SIFCO Applied Surface Concepts is required to inform you, that this product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372, if specified annual thresholds are met or exceeded.

Toxic Chemical	CAS #	Wt.% (Maximum)
Cadmium Fluoroborate	14486-19-2	- (30%)
Ethylenediamine	107-15-3	- (20%)

Your other suppliers of trade name products or mixtures containing section 313 chemicals must also notify you. If you repackage or otherwise redistribute this product to industrial customers you are required to furnish similar notification to them.

**2. CERCLA and EPCRA:**

Threshold Planning Quantity: > N/A

(Release) Reportable Quantity: > 6005 liters

Extremely Hazardous Substance: Ethylenediamine

**3. EPCRA Hazard Categories:**

Immediate (Acute) Health: Yes

Delayed (Chronic) Health: Yes

Fire: No

Sudden release of Pressure: No

Reactivity: No

**4. TSCA Statement.**

All ingredients of this product are listed under the Toxic Substances Control Act (TSCA).

**5. ODS Certification.**

This product does not contain and is not manufactured with Ozone Depleting Substances (ODS).

**6. VOC Certification.**

This product does not contain any Volatile Organic Compounds (VOC).

7. PCB Certification.

This product does not contain any polychlorinated biphenyls (PCB).

8. OSHA Cadmium Standard 29 CFR 1910.1027

Warning signs shall be displayed in all regulated areas and approaches to regulated areas with the following information:

DANGER  
CADMIUM  
CANCER HAZARD  
CAN CAUSE LUNG AND KIDNEY DISEASE  
AUTHORIZED PERSONNEL ONLY  
RESPIRATORS REQUIRED IN THIS AREA

Warning labels are required on all shipping and storage containers displaying the following:

DANGER  
CONTAINS CADMIUM  
CANCER HAZARD  
AVOID CREATING DUST  
CAN CAUSE LUNG AND KIDNEY DISEASE

STATE REGULATIONS:

California Proposition 65:

**WARNING!** This product contains detectable amounts of chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

INTERNATIONAL REGULATIONS:

WHMIS Classification.

Class D-1B, D-2A, D-2B, E

## 16. Other Information

**DISCLAIMER:** This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.