# 1. Product and Company Identification

**Product Code:** 2023  
**Product Name:** SIFCO Process Cadmium (No Bake) Code 2023  
**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  
CHEMTREC (International-Collect) +1 (703)527-3887  
**Web site address:** http://www.SIFCOASC.com  
**Email address:** info@sifcoasc.com

# 2. Hazards Identification

**Clear liquid with no characteristic odor.**  
Severe Marine Pollutant. May cause sensitisation by inhalation and skin contact.  
May cause harm to the unborn child. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Emergency Response Guidebook #154

### Emergency Overview

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

### Health Hazards (Acute and Chronic)

- **INHALATION:** Very toxic by inhalation. Vapors may irritate throat and respiratory system and cause coughing. May cause respiratory allergy.
- **INGESTION:** May cause stomach pain or vomiting. May cause severe internal injury.
- **SKIN CONTACT:** Causes burns. May cause sensitisation by skin contact.
- **EYE CONTACT:** Causes burns. Risk of serious damage to eyes.
- **HEALTH WARNINGS:** Gas or vapor is harmful on prolonged exposure or in high concentration. Known carcinogen for humans.
- **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.

# 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>Formula</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cadmium Sulphate</td>
<td>10124-36-4</td>
<td>10.0 -20.0 %</td>
<td>3CdSO4.8H2O</td>
<td>EV2700000</td>
</tr>
<tr>
<td>2. Ethylenediamine</td>
<td>107-15-3</td>
<td>10.0 -20.0 %</td>
<td>C2H8N2</td>
<td>KH8575000</td>
</tr>
</tbody>
</table>
### Hazardous Components (Chemical Name)

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS #</th>
<th>Concentration</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60.0 - 80.0 %</td>
<td>H2O</td>
</tr>
</tbody>
</table>

### 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

**Flammability Classification:** Material Will Not Burn

**Flash Pt:** NA

**Explosive Limits:**
- LEL: None
- UEL: None

**Autoignition Pt:** NA

**Special Fire Fighting Procedures**

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

**Unusual Fire and Explosion Hazards**

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

**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.

**Additional Accidental Spill Information**

Absorb in vermiculite, dry sand or earth and place into containers.

### 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

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cadmium Sulphate</td>
<td>10124-36-4</td>
<td>0.005 mg/m3</td>
<td>0.002 mg/m3</td>
<td></td>
</tr>
<tr>
<td>2. Ethylenediamine</td>
<td>107-15-3</td>
<td>10 PPM</td>
<td>10 ppm</td>
<td>25 mg/m3</td>
</tr>
</tbody>
</table>

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 and washing facilities near work area.

Protective Gloves

Nitrile, neoprene, vinyl, latex gloves.

Other Protective Clothing

Impervious boots, apron, protective clothing as required by job conditions.

Ventilation

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

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas</th>
<th>[X] Liquid</th>
<th>[ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point:</td>
<td>&lt;= 32.00 F (0.0 C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>&gt;= 212.00 F (100.0 C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: None</td>
<td>UEL: None</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>1.160 - 1.170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (vs Butyl Acetate=1):</td>
<td>&lt; 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>complete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>N.A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH:</td>
<td>10.7 - 11.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appearance and Odor

Clear 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


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

Carcinogenicity/Other Information
ACGIH Known Carcinogen

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium Sulphate</td>
<td>10124-36-4</td>
<td>Known</td>
<td>2A</td>
<td>A2</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethylenediamine</td>
<td>107-15-3</td>
<td></td>
<td></td>
<td>A4</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carcinogenicity:  NTP? Yes  IARC Monographs? Yes  OSHA Regulated? Yes

12. Ecological Information

ECOTOXICITY
Dangerous for the environment: Degrades very slowly in nature. Dangerous for the environment if discharged into watercourses.

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  UN 3289, Toxic liquid, Corrosive, Inorganic, n.o.s.
(Cadmium Sulphate, Ethylenediamine) 6.1, 8, PG II- ERG 154

DOT Hazard Class:  6.1
DOT Hazard Label:  POISON, CORROSIVE
UN/NA Number:  UN3289
Packing Group:  II

LAND TRANSPORT (Canadian TDG)
UN Number:  3289
Packing Group:  II

LAND TRANSPORT (European ADR/RID)
UN Number:  3289
Packing Group:  II

MARINE TRANSPORT (IMDG/IMO)
UN Number:  3289
Packing Group:  II
Marine Pollutant:  Yes - Serious
### 15. Regulatory Information

#### US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cadmium Sulphate</td>
<td>10124-36-4</td>
<td>No</td>
<td>Yes 10000 LB</td>
<td>Yes-Cat. N078</td>
<td>No</td>
</tr>
<tr>
<td>2. Ethylenediamine</td>
<td>107-15-3</td>
<td>Yes 10000 LB</td>
<td>Yes 5000 LB</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

#### US EPA CAA, CWA, TSCA

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>EPA CAA</th>
<th>EPA CWA NPDES</th>
<th>EPA TSCA</th>
<th>CA PROP 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cadmium Sulphate</td>
<td>10124-36-4</td>
<td>HAP, ODC ()</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>2. Ethylenediamine</td>
<td>107-15-3</td>
<td>HAP, ODC ()</td>
<td>Yes</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>3. Water</td>
<td>7732-18-5</td>
<td>HAP, ODC ()</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

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

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

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

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

#### Other Important Lists:

- **CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- **CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- **CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- **CA PROP 65:** 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:

  - [X] Yes [ ] No Acute (immediate) Health Hazard
  - [X] Yes [ ] No Chronic (delayed) Health Hazard
  - [ ] Yes [X] No Fire Hazard
  - [ ] Yes [X] No Sudden Release of Pressure Hazard
  - [ ] Yes [X] 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.
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: > 9701 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).

   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 information:

   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 reproductive harm.

INTERNATIONAL REGULATIONS:
WHMIS Classification: Class D-1B, D-2A, D-2B, E

16. Other Information

Company Policy or Disclaimer

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.