

# Safety Data Sheet

**FORMULA 2212-F**

## 1. IDENTIFICATION

**Product Name:** FORMULA 2212-F

**Revised:** 1/23/15

**Chemical Name:** Not Applicable

**Description:** Light purple liquid with pungent odor

**Recommended Use:** Boiler Water Treatment

**Restrictions on Use:** For industrial use only. Not for use in treating drinking water or in USDA regulated facilities where product may contact meat and poultry products.

### COMPANY IDENTIFICATION

**PHONE NUMBER:** 716/696-6400

BUFFALO INDUSTRIAL CHEM. INC.

P.O. BOX 664

NORTH TONAWANDA, NY 14120-0664

### EMERGENCY PHONE NUMBERS

CHEMTREC (800) 424-9300

Outside USA: CHEMTREC COLLECT (703) 527-3887

## 2. HAZARD(S) IDENTIFICATION

### GHS Classification:

Serious eye damage/irritation - Category 2B

Skin corrosion/irritation - Category 3

Specific target organ toxicity, single exposure; respiratory tract irritation - Category 3

Sensitization, skin - Category 1B

**Signal Word:** Warning

**Symbol(s):**



### Hazard Statements:

Causes eye irritation

Causes mild skin irritation

May cause respiratory irritation

May cause an allergic skin reaction

### Precautionary Statements:

#### Prevention

Avoid breathing dusts or mists. Wash hands, forearms, gloves and contaminated surfaces thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection.

#### Response

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice or attention.

If skin irritation or rash occurs: Get medical advice or attention.

Specific treatment (see First Aid on SDS or on this label).

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CONTROL CENTER or doctor for treatment advice if you feel unwell.

#### Storage

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

**Disposal**

Dispose of contents/container in accordance with local, regional, national and international regulations.

**Hazards Not Otherwise Classified:** None Known.

**Percentages of Components with Unknown Acute Toxicity:**

Dermal: 25%

Inhalation: 25%

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL INGREDIENTS	CAS NO.*	PERCENT (%)**
SODIUM BISULFITE	7631-90-5	11% - 21%
HYDROXYETHYLIDENE DIPHOSPHONIC ACID	2809-21-4	< 5%
COBALT SULFATE	10124-43-3	< 5%
SODIUM SULFITE	7757-83-7	M
SODIUM SULFATE	7757-82-6	L

Legend: L=<1%; M=1-10%; H=>10%

\* Exposure limit and regulatory information in Sections 8 & 15

\*\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush with clean, cool water for 15 minutes and if irritation persists, get medical attention.

**Skin Contact:** Immediately wash skin with soap and plenty of water while removing contaminated clothing, for at least 15 minutes. If irritation persists, get medical attention. Launder contaminated clothing before reuse.

**Inhalation:** Remove victim to fresh air. If individual experiences nausea, headache, dizziness, has difficulty in breathing or is cyanotic, seek medical attention. If not breathing, give artificial respiration via a suitable mechanical device such as a bag and mask. Do not use mouth-to-mouth resuscitation.

**Ingestion:** Do not induce vomiting. Rinse mouth with copious quantities of water first and get immediate medical attention. Drink several glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep airways clear.

**Note to Physician:** There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of gastric lavage.

**Most Important Symptoms/Effects:**

**Eye Contact:** May cause irritation. May cause corneal damage with prolonged contact.

**Skin Contact:** Prolonged contact may cause irritation. May cause sensitization in susceptible individuals.

**Inhalation:** Dusts, vapors, or mists may irritate respiratory passages.

**Ingestion:** May be toxic. May irritate the gastrointestinal tract. Very large doses cause violent colic, diarrhea, depression and possible death. May cause a severe allergic reaction in some asthmatics.

**Indication of Immediate Medical Attention and Special Treatment, if Necessary:**

Other than acute, none known. See section 11 for toxicological information.

---

**5. FIRE FIGHTING MEASURES**

---

**Suitable (and Unsuitable) Extinguishing Media:** Any media suitable for the surrounding fire.

**Specific Hazards Arising from the Chemical:** Product may be irritating to the eyes, skin, and respiratory system. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat. If evaporated to dryness, some product residuals may burn. Thermal decomposition may release oxides of sulfur

**Special Protective Equipment and Precautions for Fire-Fighters:** Wear self-contained breathing apparatus and full turn-out gear. Approach fire from upwind direction. If possible, move containers away from fire. Cool fire exposed containers with water spray. If containers rupture or leak, product may evolve irritating or toxic gas under extreme heat. Contain runoff.

---

**6. ACCIDENTAL RELEASE MEASURES**

---

**Spill Containment and Clean-up Instructions:**

Wear suitable protective equipment found in section 8. Small spills may be neutralized with lime or soda ash and flushed with copious amounts of water preferably to a sanitary sewer or waste treatment facility. Larger spills may be absorbed in a noncombustible absorbent and sweepings disposed of in an approved landfill. Avoid release of this product into the environment to prevent contamination of soil, sewers, natural waterways and/or groundwater. See Section 12 for Ecological Information.

---

**7. HANDLING AND STORAGE**

---

**Handling and Storage:**

Store in a cool, dry, well ventilated area, between 10°C and 49°C. Keep containers tightly closed when not in use and follow all recommended safety precautions when handling the material. Keep out of sun and away from heat or open flame. Keep away from incompatible materials. See Section 10 for incompatible materials.

---

**8. EXPOSURE CONTROL / PERSONAL PROTECTION**

---

**Engineering Controls:** General ventilation satisfactory. Mechanical may be required to keep concentration below maximum airborne exposure limits in confined areas.

**PERSONAL PROTECTION EQUIPMENT**

**Respiratory:** Not normally required.

**Eyes and Face:** Chemical resistant goggles or face shield.

**Hands and Skin:** Chemical resistant rubber, neoprene latex or PVC

**Other Protective Equipment:** Eyewash station and safety shower in area of use. Rubber apron and boots are also recommended where workers will be handling the product.

**EXPOSURE GUIDELINES**

**Exposure Limits:**

COMPONENT	TLV
SODIUM BISULFITE	TWA 5mg/m <sup>3</sup>
COBALT SULFATE	0.2 mg/m <sup>3</sup> TWA (ACGIH) (as Co)
0.1 mg/m <sup>3</sup> TWA (OSHA PEL)	

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

---

<b>Appearance and Odor:</b>	Light purple liquid with pungent odor		
<b>Odor Threshold:</b>	N.D.	<b>Vapor Pressure:</b>	N.A.
<b>pH (undiluted):</b>	5.75 - 6.25	<b>Vapor Density:</b>	<1
<b>Freeze Point:</b>	< 0°C (32°F)	<b>Specific Gravity(@22°C):</b>	1.228 - 1.238
<b>Boiling Point:</b>	> 100°C (212°F)	<b>Solubility in Water:</b>	Complete
<b>Flash Point:</b>	None	<b>Partition Coefficient:</b>	N.D. (n-octanol/water)
		<b>Auto-Ignition Temperature:</b>	N.D.
<b>Evaporation Rate:</b>	1.0	<b>Decomposition Temperature:</b>	N.D.
<b>Flammability (solid, gas):</b>	No	<b>Viscosity:</b>	N.A.
<b>Flammable Limits in Air:</b>	LFL – N.A. UFL – N.A.		

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not normally reactive at normal temperatures and pressure.

**Chemical Stability:** Stable; conditions to avoid: high temperatures cause the release of toxic sulfur dioxide gas and hazardous residue.

**Possibility of Hazardous Reactions:** Will not occur under normal conditions.

**Conditions to Avoid:** Avoid excessive heat, sparks or open flames.

**Incompatible Materials:** Concentrated acids or oxidizing agents. Acids and oxidizing agents cause the release of toxic and corrosive sulfur dioxide (SO<sub>2</sub>) gas.

**Hazardous Decomposition Products:** Thermal decomposition may release oxides of sulfur

## 11. TOXICOLOGICAL INFORMATION

**Ingestion Testing:** Rat, LD50: > 5,000 mg/kg\*

**Skin Testing:** None established for this product.

**Inhalation Testing:** None established for this product.

\*Calculated based on GHS acute toxicity formula.

### CHRONIC TOXICITY DATA

**Sensitization Testing:** None established for this product.

**Other Testing:** None established for this product.

**Routes of Exposure:** Eyes, Ingestion, Inhalation, Skin.

**Eye Contact:** May cause irritation. May cause corneal damage with prolonged contact.

**Skin Contact:** Prolonged contact may cause irritation. May cause sensitization in susceptible individuals.

**Inhalation:** Dusts, vapors, or mists may irritate respiratory passages.

**Ingestion:** May be toxic. May irritate the gastrointestinal tract. Very large doses cause violent colic, diarrhea, depression and possible death. May cause a severe allergic reaction in some asthmatics.

**Medical Conditions Aggravated by Exposure:** Asthma, bronchitis, emphysema and other lung diseases and chronic nose, sinus and throat conditions. Skin irritation may be aggravated in individuals with existing skin disorders.

**Chronic Effects from Repeated Overexposure:** Other than short term effects, none established.

## 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity Data:**

Invertebrate: Daphnia magna, LC50/48hr: 644 mg/l

Fish: Fathead Minnow, LC50/96hr: > 1,000 mg/l

\*Calculated based on GHS acute aquatic toxicity formula.

**Product Fate Data:** None established for this product.

**Biodegradation Data:** None established for this product.

---

### 13. DISPOSAL CONSIDERATIONS

---

**Waste Disposal:** Dispose of in accordance with local, regional, national and international regulations.

Contact the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse container (or equivalent) promptly after emptying and offer for reconditioning if appropriate. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

---

### 14. TRANSPORT INFORMATION

---

#### US DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION

NOT REGULATED

#### VESSEL TRANSPORT (IMO/IMDG)

NOT REGULATED

---

### 15. REGULATORY INFORMATION

---

#### US FEDERAL REGULATIONS

**TSCA:** All ingredients listed or exempt from listing.

**CERCLA and/or SARA RQ:**

Reportable Quantity: SODIUM BISULFITE (CAS#7631-90-5) - 5000lbs. (2273 kg)

**SARA Section 302 Hazard Class:** No ingredients listed in this section.

**SARA Section 311/312 Chemicals:**

Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

**SARA Section 313 Chemicals:** No ingredients listed in this section.

#### STATE REGULATIONS

This product contains a chemical(s) known to State of California to cause cancer and/or birth defects or other reproductive harm.

---

### 16. OTHER INFORMATION

---

#### HAZARD RATING SUMMARY

Hazard Rating System:	NFPA
Health:	2
Flammability:	0
Reactivity:	1
Special:	

CODE TRANSLATION
0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Severe Hazard

**4 = Extreme Hazard**

**Other Precautions:** This product has been designed for use in specific types of boiler water systems and should be used only in accordance with the instructions provided by the technical representative servicing the facility. The product contains only FDA approved ingredients for use in boilers where steam can contact food or edible products. This product is suitable for USDA applications, except meat and poultry products.

**SDS REVISION SUMMARY****Revised Date****Revision Notes**

1/23/15

GHS Version 1.0: Supersedes: 1/17/2014

**ABBREVIATION CODE SUMMARY****N.A.** – Not Applicable**N/A** – Not Available**N.D.** – Not Determined**N.E.** – None Established

*Disclaimer: The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.*