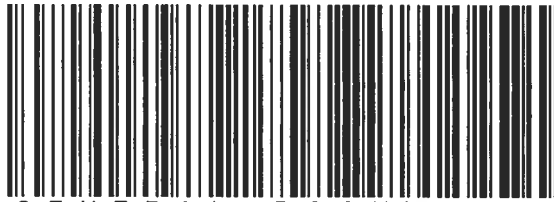


General Documents



P E R M I T



G E N E R A L D O C U M E N T S



RE: Reagent testing at Climax Mill

1 message

Lazuk, Raymond <Raymond_Lazuk@fmi.com>
To: "Scott, Eric" <Eric.Scott@state.co.us>

Fri, Nov 7, 2014 at 9:55 AM

Eric,

In keeping with our previous conversation and updated EPP (TR-24), I am providing you with the following information for an upcoming pilot-scale test that we will be conducting within the coming weeks. The MSDS is attached and the plan for testing is as follows:

Iron Depressant D 680

- D 680 is chemically similar to Orfom D8, which is the current iron depressant used at Climax.
- The purpose of this test is to verify an alternate iron depressant with a potentially lower cost.
- The test will use two totes (~600 gallons total) of D 680.
- The totes will be stored in the Reagent Storage Area under the Rougher Cells. One tote at a time will be moved by crane to the Primary Cyclone Deck.
- The D 680 be added to the Primary Cyclone Underflow using the FMI pump.
- The current D8 dosage at the Cyclone Underflow is 0.045 lbs./ton. The D 680 will be tested at 3-levels (0.035, 0.045 and 0.055 lbs./ton) with the results compared to that of D8.
- The test is expected to last for approximately 6 days.
- Spill containment and safety protocol will be the same as we currently have for handling D8.

Although not anticipated, the test could deviate slightly from that described above based on operational and testing conditions. Please let me know if you have any questions on the upcoming testing.

Thanks,

- Ray

Raymond Lazuk

Environmental Manager

Climax Molybdenum Company - Climax Mine

M1977-493

pilot scale reagent
testing

FloMin Inc.

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Revised: 01/01/2012

MATERIAL SAFETY DATA

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Flomin D 680 Depressant
Chemical Name: Disodium carboxymethyl trithiocarbonate solution
Synonyms: Mixture
Molecular Formula: Mixture
Molecular Weight: Mixture
Manufacturer: Flomin Inc. www.flomin.com
7500 FM 1405
Baytown, TX 77523
Tel: 281-573-3912; Fax: 281-573-4921
Emergency Phones: 800-424-9300 CHEMTREC (North America)
+1-703-527-3887 CHEMTREC (Worldwide)
912-884-3366 (Flomin Inc., 24-Hour)

2. HAZARDS IDENTIFICATION

Product liquid and vapor are combustible. Keep away from heat and sources of ignition. Eye contact can cause irritation and possibly corneal damage. Skin contact can cause irritation and possibly burns. Product vapors or mist may be irritating to eyes and respiratory system. Ingestion can irritate or burn mouth, throat and stomach.

POTENTIAL HEALTH EFFECTS: (See Section 11 for toxicological data.)

Eye: Eye irritant. Exposure may cause tearing, reddening, swelling, blurring of vision, and corneal damage.

Skin: Skin irritant. Effects of contact may include pain, itching, discoloration, swelling, blistering, and burns.

Ingestion: Ingestion can cause irritation or burns of the mouth, throat, esophagus, and stomach. Central nervous system effects may include headaches, weakness, and nausea.

Inhalation: Prolonged inhalation of vapors and mists can be irritating to the respiratory system. Central nervous system effects may include headaches, weakness, dizziness, pain, coughing, nausea, and vomiting.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS #</u>	<u>Weight, %</u>	<u>Exposure Limit</u>
Disodium carboxymethyl trithiocarbonate	86932-91-4	35 - 45	Not established
Sodium hydroxide	1310-73-2	<5	Not established

4. FIRST AID MEASURES

- Inhalation:** Move to fresh air immediately. Administer oxygen if necessary. Seek medical attention if symptoms persist.
- Skin contact:** Remove soaked clothing immediately and wash affected skin with soap and water. Get medical treatment for burns and persistent irritation. Launder contaminated clothing before reuse.
- Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Keep eye wide open while rinsing and lift upper and lower lids to ensure complete removal of chemical.
- Ingestion:** Do not induce vomiting. Call a physician immediately.

5. FIRE FIGHTING MEASURES**Flammable properties:**

- **Flash point** 165°F (74°C), TAG CC
- **Flammable limits** Not determined
- **Autoignition temp.** Not determined
- **Decomposition temp.** Not determined

Extinguishing media: Use water spray, carbon dioxide, or dry chemical.

Fire fighting precautions: Avoid contact with liquid or mist. Keep personnel removed and upwind of fire.

Protective equipment: Wear NIOSH approved, positive pressure, self-contained respirator. Wear full protective equipment for body and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear full protective equipment for eyes, body and respiratory system. Ventilate spill area. Remove all sources of ignition.

Clean up methods: Dike spill and collect for disposal or reuse. Use adsorbents on residual material. Flush spill area with water.

Environmental: Keep flush material out of waterways. Dispose of cleanup material in an approved manner.

7. HANDLING AND STORAGE

Handling: Wear protective equipment for eyes, body and respiratory system.

Storage: Store in closed containers in a cool area away from sources of heat or ignition. Precautions should be taken to avoid static electricity discharge. Store this product in stainless steel, polyethylene, or polypropylene containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Personal protection equipment:**

- **Respiratory:** Wear a properly fitted NIOSH/MSA approved respirator whenever significant exposure to vapor or mist is likely.
- **Hand:** Neoprene, polyvinyl, butyl rubber or nitrile rubber gloves are suitable.
- **Eye:** Wear chemical splash proof goggles or face shield.
- **Skin:** Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

Hygiene: Wash hands before breaks and immediately after handling the product. Do not eat or store food and drinks where this product is used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, orange-red liquid
Odor: Mild odor
Boiling point: >212°F (>100°C)
Pour point: 30°F (-1°C)
Vapor pressure: Not determined
Specific gravity: 1.31 @ 60°F (16°C)
Vapor density: >1 (Air =1)
Flash point: >165°F (>74°C), TAG CC
pH: Not applicable
Water solubility: Completely soluble
Viscosity: 5.4 cSt @ 70°F (21°C)

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions. No hazardous polymerization will occur.

Conditions to avoid: High temperatures and ignition sources. Avoid oxidizing agents.

Hazardous decomposition

Products: Sulfur oxides, carbon dioxide, and carbon monoxide may form under fire conditions.

11. TOXICOLOGICAL INFORMATION**Acute toxicity:**

- **Oral:** Not determined
- **Dermal:** Not determined
- **Inhalation:** Not determined

Irritation:

- **Skin:** Severe skin irritant.
- **Eyes:** Severe eye irritant.

Sensitization: May sensitize some individuals toward asthmatic conditions and allergic skin reactions.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: Not determined

Biodegradation: Not determined

13. DISPOSAL CONSIDERATIONS

Disposal: Dispose of only in accordance with regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Containers: Empty containers retain product residues (liquid and vapor) and can be dangerous. Do not cut or burn or expose empty containers to heat, flame or sources of ignition. Empty containers should be completely drained and disposed in accordance with regulations.

14. TRANSPORT INFORMATION

<u>Agency</u>	<u>UN#, Proper shipping name, Hazard class, Packing group, Advisory placard</u>
DOT:	UN 3267, Corrosive Liquid, Basic, Organic, n.o.s. (contains sodium hydroxide), 8, II, CORROSIVE This product is regulated as a hazardous material as defined by the DOT.
IMO:	UN 3267, Corrosive Liquid, Basic, Organic, n.o.s. (contains sodium hydroxide), 8, II, CORROSIVE This product is regulated as a dangerous good as defined by the IMDG code for marine transport.
ICAO/IATA:	UN 3267, Corrosive Liquid, Basic, Organic, n.o.s. (contains sodium hydroxide), 8, II, CORROSIVE This product is regulated as a dangerous good as defined by the ICAO/IATA for air transport.
Canada:	UN 3267, Corrosive Liquid, Basic, Organic, n.o.s. (contains sodium hydroxide), 8, II, CORROSIVE This product not regulated as a dangerous good as defined by the WHIMS classification.

15. REGULATORY INFORMATION

Components of this product are listed on the TSCA (US), DSL (Canada), EINECS (Europe) and AICS (Australia) inventories.

SARA 302: Contains no chemicals subject to 40 CFR 302 reporting.

SARA 311/312: Immediate (acute) health hazard.

SARA 313: Contains no chemicals subject to 40 CFR 313 reporting.

16. OTHER INFORMATION**Hazard Ratings:**

	<u>Health</u>	<u>Flammability</u>	<u>Instability</u>	<u>Physical Hazard</u>
- NFPA	3	2	0	---
-HMIS	3	2	---	0

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