



Climax Mine
Highway 91 - Fremont Pass
Climax, CO 80429
Phone (719) 486-7718
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January 17, 2022

Mr. Dustin Czapla
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
Department of Natural Resources
1001 E 62nd Ave., Room 215
Denver, Colorado 80216

RE: Climax Mine, Permit No. M-1977-493, Reagent Testing

Mr. Czapla,

Climax Metallurgy would like to run a series of lab tests on a new depressant reagent that would be used in the flotation process. The reagent is Chemstar 21437, manufactured by Chemstar Products Company (see attached Safety Data Sheet). Proposed dosing rate for this reagent is 25 grams/ton of ore. The test will occur at lab scale in the Climax metallurgical lab over the next 2-3 months. The total reagent amount is less than one kilogram and will be stored in containers in the metallurgical lab with proper containment. Any unused reagent following completion of testing will be disposed in accordance with applicable waste regulations. An EPP update will be completed if this becomes a permanent change.

Please feel free to call me at (719) 486-7633 if you have any questions about this request.

Sincerely,

Eric Detmer, PE
Chief Environmental Engineer

Attachment - SDS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

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| Product name: | 21437 |
| Recommended use: | |
| Company details: | Chemstar Products Company |
| Address: | 3232 East 40th Street, Minneapolis, MN, 55406-3203, US. |
| Telephone number: | (612) 722-0079 |
| Emergency telephone number: | ChemTrek 800-424-9300 |
| Date of preparation: | 16 Dec 2021 |

SECTION 2: HAZARDS IDENTIFICATION

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| Hazard classifications: | Non-hazardous |
| Priority and secondary identifiers: | Non-hazardous |
| Risk and safety phrases: | Respiratory tract irritant Irritant (eyes) |

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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| Chemical characterization: | Modified polysaccharide | | |
| Product components: | Product components | | |
| Name | Cas | Proportion | |
| Modified Starch | 56780-58-6 | 10-20% | |
| Water | 7732-18-5 | 80-90% | |

SECTION 4: FIRST AID MEASURES

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| Necessary first aid measures: | <p>Inhalation: Exposure via inhalation is not likely. If inhaled, remove to fresh air.</p> <p>Skin: Wash skin with soap and water.</p> <p>Eyes: Flush eyes with water for 15 minutes, seek medical attention.</p> <p>Ingestion: If swallowed, dilute by drinking large quantities of water, seek medical attention.</p> <p>Chronic exposure: No data</p> <p>Carcinogenicity: Not a likely carcinogen</p> |
| Workplace facilities: | No special facilities required. |
| Required instructions: | Observe good work practices to minimize skin contact. Wash hands and exposed skin after use. Do not eat or drink while using. |
| Notes for medical personnel: | Apply symptomatic therapy. |

SECTION 5: FIRE FIGHTING MEASURES

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| Type of hazard: | |
| Fire hazard properties: | |
| Regulatory requirements: | |
| Extinguishing media and methods: | Water, CO2, dry powder or foam |

Hazchem code:

Recommended protective clothing: When fighting a major fire, wear full protective clothing including breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency procedures: Sweep up and flush area with water.
Caution: Wet floors may be slippery when material is present. Avoid production of dust.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid practices which produce dust. Store away from heat, flame and spark source.
Regulatory requirements: N/A
Handling practices: N/A
Approved handlers: Not required
Conditions for safe storage: Store away from heat, flame and spark source
Store site requirements:
Packaging:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Workplace exposure standards:
Application in the workplace: Prevent exposure by using engineering controls, personal protective equipment, and proper work practices. Avoid the creation of dust
Exposure standards outside the workplace: TEL and EELs are not set at this time
Engineering controls: Ventilation as needed to control dust
Personal protection: Dust respirator (NIOSH/MSHA TC-21C-132) as needed.
Eye protection
Protective gloves
References: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specify product data: Physical state: Liquid
Solubility in water: appreciable
pH (4% sol): 9-11
Appearance: Yellow Liquid with slight odor
Required specifications: N/A
Further specifications: N/A
Specific advice:

SECTION 10: STABILITY AND REACTIVITY

Stability of the substance: Stable under normal conditions of use and storage

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| Conditions to avoid: | N/A |
| Material to avoid: | Strong oxidizing agents |
| Hazardous decomposition products: | Oxides of carbon |
| Hazardous polymerization: | Will not occur |
| Specific data: | Flammable Limits: LEL: N/A UEL: N/A |

SECTION 11: TOXICOLOGICAL INFORMATION

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| Data and interpretation: | This material is not manufactured to contain any hazardous components. In eyes or respiratory systems it may cause irritation if heavy concentrations are encountered. |
| Summaries data: | Inhalation: May cause irritation to respiratory system Skin: None known Ingestion: Not edible |
| Format: | |

SECTION 12: ENVIRONMENTAL INFORMATION

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| Potential environmental interactions: | |
| Data organisation: | |
| Environmental risk and safety phrases: | |

SECTION 13: DISPOSAL CONSIDERATIONS

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| Disposal information: | Dispose of in a manner which is in accordance with state and local regulations |
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SECTION 14: TRANSPORT INFORMATION

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| Relevant information: | See local and state regulations |
| Other requirements: | |

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

All substances of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

SECTION 16: OTHER INFORMATION

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| Additional information: | none |
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