



**Climax Mine**  
Highway 91 - Fremont Pass  
Climax, CO 80429  
Phone (719) 486-7718  
Fax (719) 486-2251

December 30, 2020

Mr. Dustin Czapla  
Environmental Protection Specialist  
Division of Reclamation, Mining and Safety  
Department of Natural Resources  
1313 Sherman St. Room 215  
Denver, Colorado 80203

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

Dear Mr. Czapla

Climax Metallurgy would like to run a short test on a reagent that would be used in the flotation process. The reagent is Hostaflo 17230 from Clariant Corporation (see attached SDS). The proposed dosing rate for the product will be 0.24lb/ton of ore. The test will occur over the next month. The reagent will be stored in a 250ml container and placed in secondary containment within the Climax metallurgical lab. In the event we see any issues with our process from the reagent testing, we will discontinue the test and dispose of the remaining chemical in accordance with waste regulations. We will update the EPP if we decide to make this change permanent.

Please let me know if you have any concerns. We would like to begin the test as soon as possible.

Sincerely,

A handwritten signature in black ink that reads 'Diana Kelts'.

Diana Kelts  
Environmental Manager

attachments

## Hostafлот 17230

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## SECTION 1. IDENTIFICATION

**Identification of the company:**

Clariant Corporation  
4000 Monroe Road  
Charlotte, NC, 28205  
Telephone No.: +1 704 331 7000

**Information of the substance/preparation:**

BU Oil & Mining Services  
Product Stewardship +1-704-331-7710

**Emergency tel. number:** +1 800-424-9300 CHEMTREC

**Trade name:** Hostafлот 17230

**Primary product use:** Industrial use

**Chemical family:** flotation agent

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200**

Skin irritation : Category 2

Skin sensitisation : Category 1

Aspiration hazard : Category 1

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves.

**Response:**

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P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P331 Do NOT induce vomiting.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Petroleum Distillates	Not Assigned	70 - 90
Proprietary Ingredient 73	Not Assigned	20 - 30

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

General advice : Remove/ Take off immediately all contaminated clothing.  
Get medical advice/ attention if you feel unwell.

If inhaled : If inhaled, remove to fresh air.  
Get medical advice/ attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : If swallowed do not induce vomiting, seek medical advice and show safety datasheet or label

Most important symptoms and effects, both acute and delayed : No symptoms known currently.  
No hazards known at this time.

Notes to physician : Treat symptomatically.

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**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray jet  
Alcohol-resistant foam  
Dry powder  
Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Hazardous decomposition products formed under fire conditions.
- Further information : Wear suitable protective equipment.
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.  
Ensure adequate ventilation.
- Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Treat recovered material as described in the section "Disposal considerations".

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**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Observe the general rules of industrial fire protection
- Advice on safe handling : When used and handled appropriately no special measures are needed
- Further information on storage conditions : Keep containers tightly closed in a cool, well-ventilated place.  
Handle and open container with care.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Petroleum Distillates	Not Assigned	TWA (Mist)	5 mg/m3	OSHA P0

**Personal protective equipment**

Respiratory protection : In case of inadequate ventilation wear respiratory protection.  
Protection necessary if aerosols or vapors should develop.

Hand protection  
Remarks : Chemical resistant gloves

Eye protection : Safety glasses

Protective measures : Observe the usual precautions for handling chemicals.

Hygiene measures : Wash hands before breaks and at the end of workday.  
Use protective skin cream before handling the product.  
Take off immediately all contaminated clothing and wash it before reuse.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : yellow

Odour : characteristic

Odour Threshold : no data available

pH : Not applicable

Melting point : < -58 °F / < -50 °C

Boiling point : > 482 °F / > 250 °C

Flash point : > 200.01 °F / > 93.34 °C

Evaporation rate : no data available

Self-ignition : no data available

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Upper explosion limit / upper flammability limit	:	no data available
Lower explosion limit / Lower flammability limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Density	:	0.79 - 0.83 g/cm <sup>3</sup> (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	no data available
Decomposition temperature	:	no data available
Viscosity		
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use. Stable
Conditions to avoid	:	None known.
Incompatible materials	:	not known
Hazardous decomposition products	:	When handled and stored appropriately, no dangerous decomposition products are known

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Eye contact  
Skin contact  
Ingestion

**Acute toxicity****Product:**

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Acute inhalation toxicity : Acute toxicity estimate: 6.13 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 3,333 mg/kg  
Method: Calculation method

**Respiratory or skin sensitisation****Components:****Proprietary Ingredient 73:**

Result: The product is a skin sensitiser, sub-category 1B.

**Carcinogenicity****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Experience with human exposure****Product:**

General Information : The possible symptoms known are those derived from the labelling (see section 2).

**Further information****Product:**

Remarks: no data available

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

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**Other adverse effects****Product:**

Additional ecological information : No data is available on the product itself.

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- RCRA - Resource Conservation and Recovery Authorization Act : This material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations
- Waste from residues : Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities
- Contaminated packaging : Contaminated packaging material should be treated equivalent to residual chemicals. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

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**SECTION 14. TRANSPORT INFORMATION**

DOT	not restricted
IATA	not restricted
IMDG	not restricted

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**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Respiratory or skin sensitisation  
Aspiration hazard  
Skin corrosion or irritation



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**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

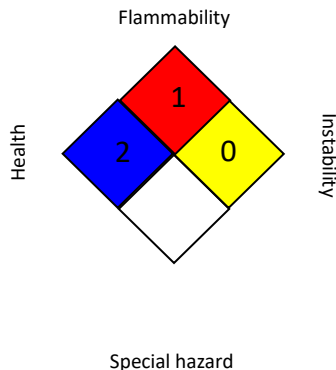
**Clean Water Act**

This product does not contain any priority pollutants related to the U.S. Clean Water Act, This product is an oil in the context of the USA Clean Water Act (CWA). Spills to USA surface waters, or to watercourse or sewer waters that cause a visible sheen must be reported to the National Response Center.

**The components of this product are reported in the following inventories:**

TSCA : All components are compliant with the TSCA Inventory Notification (Active) rule.

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**SECTION 16. OTHER INFORMATION****Further information****NFPA 704:****Full text of other abbreviations**

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000  
OSHA P0 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -

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International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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