Climax Molybdenum
A Freeport-McMoRan Company

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

August 11, 2021

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

Mr. Czapla,

Climax Metallurgy would like to run a short series of 1 kg bench float test on a new depressant reagent that would be used in the flotation process. The reagent is AERO NR-7361 manufactured by Cytec Industries Inc. (see attached SDS). The proposed dosing rate for this reagent would be 0.06-0.73lb/ton of ore. The test will occur at lab scale in our met lab over the next month. The total reagent amount is approx. 50-500 mL and will be stored in containers in the met lab with proper containment. In the event we have any leftover reagents after testing has completed, we will 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,

Alex Ungers
Senior Environmental Scientist

attachments

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name AERO® NR-7361 DEPRESSANT

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance / Mixture

- Mining chemicals

1.3 Details of the supplier of the safety data sheet

Company

CYTEC INDUSTRIES INC.
504 CARNEGIE CENTER
PRINCETON, NJ 08540 USA
Telephone: +1-973-357-3193

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

Disclaimer

The ® indicates a Registered Trademark in the United States and the ™ indicates a trademark in the United States. The mark may also be registered, subject of an application for registration, or a trademark in other countries.

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.

2.2 Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram

Signal Word

- Danger

Hazard Statements

- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.

Precautionary Statements

Prevention

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.

Storage

- P405 Store locked up.

Disposal

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

2.3 Other hazards which do not result in classification

- H402: Harmful to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

- Chemical nature Dithiocarbamates

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Sulfide salt	*****	30 - 60
Carboxylic acid	*****	<= 4
Sodium hydroxide (Na(OH))	1310-73-2	<= 3
Dithiocarbonate compound	*****	< 2
2-Propanol	67-63-0	<= 1

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1 Description of first-aid measures

In case of inhalation

- Quickly move the person away from the contaminated area. Make the affected person rest.
- Immediate medical attention is required.
- Show this sheet to the doctor.
- Be prepared to provide first aid or medical support if necessary.

In case of skin contact

- Wash off immediately with plenty of water for at least 15 minutes.
- Use appropriate protective equipment when treating a contaminated person.
- Immediate medical attention is required.
- Show this sheet to the doctor.
- Be prepared to provide first aid or medical support if necessary.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Keep eye wide open while rinsing.
- Show this sheet to the doctor.
- Always obtain medical advice, even if there are no symptoms.
- Be prepared to provide first aid or medical support if necessary.

In case of ingestion

- Do NOT induce vomiting.
- Immediate medical attention is required.
- Show this sheet to the doctor.
- Do not give anything to drink.
- Be prepared to provide first aid or medical support if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Effects

- Chronic exposure may cause allergic dermatitis.
- Exposure may cause allergic rhinitis, conjunctivitis, asthma or shock.
- If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
- In case of inhalation, irritation/corrosion of the respiratory tract.
- May cause irreversible skin damage.
- Chronic exposure may cause dermatitis.
- May cause irreversible eye damage.
- Loss of the eye

Symptoms

- Breathing difficulties
- Irritation
- Redness
- Swelling of tissue
- May cause respiratory tract irritation.
- allergic rhinitis
- Severe allergic skin reactions, bronchiospasm and anaphylactic shock
- Itching
- Causes skin burns.
- Lachrymation
- Conjunctivitis
- Causes eye burns.
- The gas deadens the sense of smell. Do not depend on odor to detect presence of gas.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- Take victim immediately to hospital.
- Immediate medical attention is required.
- Consult with an ophthalmologist immediately in all cases.
- Burns must be treated by a physician.
- Treat symptomatically.
- Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

Flash point	Method: ASTM D 93 No flash up to boiling point
Autoignition temperature	No data available
Flammability / Explosive limit	No data available

5.1 Extinguishing media

Suitable extinguishing media

- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- Under fire conditions:
- Will burn
- On combustion, toxic gases are released.

Hazardous combustion products:

- Sulfur dioxide, hydrogen sulfide or carbon disulfide may be formed under fire conditions.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

- In the event of fire, wear self-contained breathing apparatus.
- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Wear a positive-pressure supplied-air respirator with full facepiece.
- For further information refer to section 8 "Exposure controls / personal protection."

Specific fire fighting methods

- Cool containers/tanks with water spray.
- Do not use a solid water stream as it may scatter and spread fire.

Further information

- Do not flush to sewer which may contain acid.
- This could result in generation of toxic and flammable carbon disulfide, carbonyl sulfide and hydrogen sulfide.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Where exposure level is not known, wear approved, positive pressure, self-contained respirator.

- Where exposure level is known, wear approved respirator suitable for level of exposure.
- Avoid contact with the skin and the eyes.
- In addition to the protective clothing/equipment in Section 8, wear a two piece PVC suit with hood or PVC overalls with hood.

6.2 Environmental precautions

- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
- Contain the spilled material by diking.
- Do not let product enter drains.
- Do not allow uncontrolled discharge of product into the environment.

- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

- Stop leak if safe to do so.
- Keep in properly labeled containers.
- Keep in suitable, closed containers for disposal.
- Wash nonrecoverable remainder with large amounts of water.
- Soak up with inert absorbent material and dispose of as hazardous waste.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.
- Dispose of in accordance with local regulations.
- Never return spills in original containers for re-use.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.
- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands after handling.
- Do not eat, drink or smoke when using this product.

- Large quantities of undiluted product should not be mixed with acids, since evolution of toxic and flammable hydrogen sulfide, carbon disulfide and carbonyl sulfide could result. In particular, precautions must be taken to avoid the accidental discharge of large volumes of the product in acid storage tanks or any tank or containment containing acidic materials. This precaution does not, of course, apply to addition of this reagent to flotation pulps in amounts customarily used in flotation, where the reagent amounts are small and instantly diluted to concentrations well below the solubility limits.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Ensure that eyewash stations and safety showers are close to the workstation location.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Do not freeze.

Requirements for storage rooms and vessels

Recommended storage temperature: 68 - 77 °F (20 - 25 °C)

- To guarantee the quality and properties of the product keep according to Storage temperature and conditions.

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Components with workplace occupational exposure limits

Components	Value type	Value	Basis
Sodium hydroxide (Na(OH))	C	2 mg/m3	National Institute for Occupational Safety and Health
Sodium hydroxide (Na(OH))	C	2 mg/m3	American Conference of Governmental Industrial Hygienists
Sodium hydroxide (Na(OH))	TWA	2 mg/m3	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
2-Propanol	TWA	200 ppm	American Conference of Governmental Industrial Hygienists
2-Propanol	STEL	400 ppm	American Conference of Governmental Industrial Hygienists
2-Propanol	TWA	400 ppm 980 mg/m3	National Institute for Occupational Safety and Health
2-Propanol	ST	500 ppm 1,225 mg/m3	National Institute for Occupational Safety and Health
2-Propanol	TWA	400 ppm 980 mg/m3	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.		

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)

Components	CAS-No.	Concentration
Sodium hydroxide (Na(OH))	1310-73-2	10 milligram per cubic meter
2-Propanol	67-63-0	2000 ppm

Biological Exposure Indices

Components	Value type	Value	Basis
2-Propanol	BEI	40 mg/l Acetone Urine End of shift at end of workweek	American Conference of Governmental Industrial Hygienists

8.2 Exposure controls

Control measures

Engineering measures
- Ensure adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection
- Keep in a well-ventilated place.

Hand protection
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Impervious gloves

Suitable material
- Nitrile or fluorinated rubber gloves.

Eye protection
- Chemical resistant goggles must be worn.
- Tightly fitting safety goggles
- Wear a face shield if there is a potential for direct contact to the face with dusts, mists, aerosols, splashes.

Skin and body protection
- Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures
- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Color:	yellow to red to brown

Odor	sulfur
Odor Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	Boiling point/boiling range: 230 °F (110 °C)
Flash point	Method: ASTM D 93 No flash up to boiling point
Evaporation rate (Butylacetate = 1)	No data available
Flammability (solid, gas)	No data available
Flammability (liquids)	No data available
Flammability / Explosive limit	No data available
Autoignition temperature	No data available
Vapor pressure	No data available
Vapor density	No data available
Density	1.27 - 1.36 g/cm3 (77 °F (25 °C))
Relative density	No data available
Solubility	Water solubility: miscible
Partition coefficient: n-octanol/water	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other information

Reactions with water / air	Contact with acids liberates toxic gas.

SECTION 10: Stability and reactivity

10.1 Reactivity

- no data available

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Material can decompose at pH<7, releasing carbon disulfide (CS2) gas.

10.4 Conditions to avoid

- Incompatible with acids.

10.5 Incompatible materials

- Acids
- Oxidizing agents
- Reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition products
- Hydrogen sulfide
- carbon disulphide.
- Carbon dioxide (CO2)

Thermal decomposition
- Carbon monoxide
- Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Not classified as hazardous for acute oral toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute inhalation toxicity	Not classified as hazardous for acute inhalation toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute dermal toxicity	Not classified as hazardous for acute dermal toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute toxicity (other routes of administration)	Not applicable
Skin corrosion/irritation	Corrosive to skin According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Serious eye damage/eye irritation	Risk of serious damage to eyes. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Respiratory or skin sensitization

Sulfide salt	Classified as a skin sensitizer category 1 according to GHS criteria Method: Estimation method / Structure-activity relationship (SAR)
Carboxylic acid	Local lymph node assay - Mouse Does not cause skin sensitization. Method: OECD Test Guideline 429 Unpublished reports
Sodium hydroxide (Na(OH))	Humans Does not cause skin sensitization. Published data
Dithiocarbonate compound	category approach

	Classified as a skin sensitizer sub-category 1B according to GHS criteria Unpublished reports
2-Propanol	Buehler Test - Guinea pig Responding animals in Buelher test < 15 % The substance or mixture is not considered to be sensitizing by skin contact. Method: OECD Test Guideline 406 Unpublished reports

Mutagenicity

Genotoxicity in vitro	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Genotoxicity in vivo	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Carcinogenicity	The product is not considered to be carcinogenic. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA

Toxicity for reproduction and development

Toxicity to reproduction / fertility	The product is not considered to affect fertility.,According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Developmental Toxicity/Teratogenicity	The product is not considered to be toxic for development.,According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

STOT

STOT-single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
STOT-repeated exposure	The substance or mixture is not considered to cause damage to organs through prolonged or repeated exposure. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data. The product itself has not been tested.

Experience with human exposure

Experience with human exposure : Inhalation

In contact with acid
Symptoms: Released substances:
Hydrogen sulphide
carbon disulphide.
Carbonyl sulfide
Inhalation may provoke the following symptoms:
Irritating to the respiratory system and mucous membranes.
Coma
cardiorespiratory failure
Neurological disorders
Gastrointestinal disturbance

Experience with human exposure : Skin contact

No data is available on the product itself.

Experience with human exposure : Eye contact

No data is available on the product itself.

Experience with human exposure : Ingestion

No data is available on the product itself.

Aspiration toxicity

No aspiration toxicity classification, According to the available data on the components, According to the classification criteria for mixtures.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	The product itself has not been tested.
Acute toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested.
Toxicity to aquatic plants	The product itself has not been tested.
Toxicity to microorganisms	The product itself has not been tested.
Chronic toxicity to fish	The product itself has not been tested.
Chronic toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested.

Sediment compartment

Toxicity to benthic organisms	The product itself has not been tested.

Terrestrial Compartment

Toxicity to soil dwelling organisms	The product itself has not been tested.
Toxicity to terrestrial plants	The product itself has not been tested.
Toxicity to above ground organisms	The product itself has not been tested.

12.2 Persistence and degradability

Abiotic degradation

Stability in water	Conclusion is not possible for a mixture as a whole.
Photodegradation	Conclusion is not possible for a mixture as a whole.
Other Physicochemical reactions	Conclusion is not possible for a mixture as a whole.

Physical- and photo-chemical elimination

Physico-chemical removability	Conclusion is not possible for a mixture as a whole.

Biodegradation

Biodegradability	As (bio)degradability is not relevant for mixtures, all the components of the mixture were assessed individually (rapid degradability assessment available below).
Ratio BOD / COD	Conclusion is not possible for a mixture as a whole.
Ratio BOD / ThOD	Conclusion is not possible for a mixture as a whole.
Biochemical Oxygen Demand (BOD)	Conclusion is not possible for a mixture as a whole.
Dissolved organic carbon (DOC)	Conclusion is not possible for a mixture as a whole.
Chemical Oxygen Demand (COD)	Conclusion is not possible for a mixture as a whole.
Adsorbed organic bound halogens (AOX)	Conclusion is not possible for a mixture as a whole.
Degradability assessment	Conclusion is not possible due to incomplete or heterogeneous data on the components Unpublished reports Published data

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water	Conclusion is not possible for a mixture as a whole.
Bioconcentration factor (BCF)	As bioaccumulation is not relevant for mixtures, all the components of the mixture were assessed individually. Conclusion is not possible due to incomplete or heterogeneous data on the components Unpublished reports Published data

12.4 Mobility in soil

Adsorption potential (Koc)	Conclusion is not possible for a mixture as a whole.
Known distribution to environmental compartments	Conclusion is not possible due to incomplete or heterogeneous data on the components

12.5 Results of PBT and vPvB assessment	This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB). Remark(s): According to the available data on the components

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard	Harmful to aquatic life. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Long-term (chronic) aquatic hazard	Harmful to aquatic life with long lasting effects. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- The Company encourages the recycle, recovery and reuse of materials, where permitted. If disposal is necessary, The Company recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT

14.1 UN number	UN 1760
14.2 Proper shipping name	CORROSIVE LIQUIDS, N.O.S. (Sulfide salt)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	
Packing group	II
ERG No	154
14.5 Environmental hazards	NO
Marine pollutant	

14.6 Special precautions for user

This product contains one or more ingredients identified as a hazardous substance in Appendix A of 49 CFR 172.101.

Reportable quantities	:	RQ substance: Sodium hydroxide RQ limit for substance: 1,000 lb

TDG

14.1 UN number	UN 1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (Sulfide salt)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	
Packing group	II
ERG No	154
14.5 Environmental hazards	NO
Marine pollutant	

NOM

14.1 UN number	UN 1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (Sulfide salt)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	
Packing group	II
ERG No	154
14.5 Environmental hazards	NO
Marine pollutant	

IMDG

14.1 UN number	UN 1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (Sulfide salt)
IMDG Code segregation group	Alkalis (SGG18)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	
Packing group	II
14.5 Environmental hazards	NO
Marine pollutant	
14.6 Special precautions for user	
EmS	F-A , S-B

For personal protection see section 8.

14.7 Transport in bulk vessels according to IMO instruments

No data available

IATA

14.1 UN number	UN 1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (Sulfide salt)
14.3 Transport hazard class Label(s):	8 8
14.4 Packing group Packing group	II
Packing instruction (cargo aircraft) Max net qty / pkg Packing instruction (passenger aircraft) Max net qty / pkg	855 30.00 L 851 1.00 L
14.5 Environmental hazards	NO

14.6 Special precautions for user
For personal protection see section 8.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	- Substance(s) not listed on TSCA inventory - This is a research and development (R&D) sample. The chemical, physical, and toxicological properties of this material have not been fully investigated. Its handling or use may be hazardous. It may only be used for R&D purposes under the supervision of technically qualified individuals.
United States TSCA Inventory	- Based on the U.S. EPA's assessment, which includes analog data, a substance in this product may also cause genetic toxicity, carcinogenicity, reproductive toxicity, and specific-target organ toxicity. Based on the GHS criteria, these hazards are not classifiable.
Australia Inventory of Chemical Substances (AICS)	- One or more components not listed on inventory
Canadian Domestic Substances List (DSL)	- One or more components not listed on inventory

Japan. CSCL - Inventory of Existing and New Chemical Substances	- One or more components not listed on inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- One or more components not listed on inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- One or more components not listed on inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- One or more components not listed on inventory
Taiwan Chemical Substance Inventory (TCSI)	- One or more components not listed on inventory
New Zealand. Inventory of Chemical Substances	- One or more components is not listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.

15.2 Federal Regulations

US. EPA EPCRA SARA Title III

SARA Hazard Designation Sections 311/312 (40 CFR 370)

Respiratory or skin sensitization	Yes
Skin corrosion or irritation	Yes
Serious eye damage or eye irritation	Yes

The categories not mentioned are not relevant for the product.

Section 313 Toxic Chemicals (40 CFR 372.65)
The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CAS-No.	Concentration
2-Propanol	67-63-0	<= 1%

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)
This material does not contain any components with a section 302 EHS TPQ.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)
This material does not contain any components with a SARA 302 RQ.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)
This material does not contain any components with a section 304 EHS RQ.

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Components	CAS-No.	Reportable quantity
Sodium hydroxide (Na(OH))	1310-73-2	1000 lb

Calculated RQ exceeds reasonably attainable upper limit.

15.3 State Regulations

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

Please contact your local sales representative if you have questions and need more information concerning this product under California's Proposition 65 statute (www.p65warnings.ca.gov).

SECTION 16: Other information

NFPA (National Fire Protection Association) - Classification

Health	3 serious
Flammability	1 slight
Instability or Reactivity	0 minimal

Date Prepared: 10/29/2020

Key or legend to abbreviations and acronyms used in the safety data sheet

- C: Ceiling limit
- ST: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- STEL: Short-term exposure limit
- TWA: 8-hour, time-weighted average
- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- BHOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.