Substance key: 000000476278	Revision Date: 05/10/2018
Version : 1 - 3 / USA	Date of printing :04/15/2021

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:	**CORRTREAT 12254**
Material number:	260168
Chemical family:	Mixture
Primary product use:	Corrosion inhibitor

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Inhalation)	:	Category 4
Eye irritation	:	Category 2A
Skin sensitisation	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements :
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Disposal:

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

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
2-Butoxy ethanol	111-76-2	< 3
2-Mercaptoethanol	60-24-2	< 2
Proprietary ingredient 5515	Not Assigned	< 2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

If inhaled : Move the victim to fresh air.
Give oxygen or artificial respiration if needed.
Get immediate medical advice/ attention.
Never give anything by mouth to an unconscious person.

In case of skin contact : Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed	:	Get medical attention immediately. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	:	The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool containers/tanks with water spray.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO_2) Burning produces noxious and toxic fumes.
Further information	:	Wear full protective clothing and self-contained breathing apparatus.
Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Contain spill. Ensure adequate ventilation and wear appropriate personal protective equipment. Collect onto inert absorbent. Place in sealable container. Do not allow to contaminate water sources or sewers.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Use only with adequate ventilation and proper protective eyewear, gloves, and clothing. Wash thoroughly after handling. Keep container closed.
Technical measures/Precautions	:	Store in a cool, dry location away from heat, sparks and open flames. Store in original container. Keep container tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Butoxy ethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	25 ppm 120 mg/m3	OSHA P0
2-Mercaptoethanol	60-24-2	TWA	0.2 ppm	US WEEL

Engineering measures : Local ventilation recommended - mechanical ventilation may be used.

Personal protective equipment

Respiratory protection : If airborne concentrations pose a health hazard, become irritating, or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29CFR1910.134.

Hand protection
Remarks : Chemical resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Wear suitable protective equipment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear

dark brown

Odour : slight

Odour Threshold : not determined

pH : 5 - 6

Freezing point : not determined

Boiling point	:	not determined
Flash point	:	> 93.4 °C
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapour pressure	:	not determined
Relative vapour density	:	not determined
Density	:	0.99 - 1.03 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	not determined
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	no data available
Viscosity		
Viscosity, dynamic	:	< 20 mPa.s
Viscosity, kinematic	:	not determined

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use. Stable
Conditions to avoid	:	Keep away from heat. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	:	not known
Hazardous decomposition	:	No decomposition if stored and applied as directed.

products

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Skin contact
Inhalation
Ingestion
Skin Absorption

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: Test atmosphere: gas Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: Method: Calculation method

Components:

2-Butoxy ethanol:

Acute oral toxicity	:	LD50 (Rat): 1,746 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male and female): 450 - 486 ppm Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Pig): 6,411 mg/kg

2-Mercaptoethanol:

Acute oral toxicity	:	LD50 (Rat, male and female): 98 - 168 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: By analogy with a product of similar composition
Acute inhalation toxicity	:	LC50 (Rat, male): ca. 2 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Other Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Rabbit, male and female): ca. 112 - 224 mg/kg Method: Other

Skin corrosion/irritation

Product:

Result: irritating
Remarks: The product has not been tested. The information is derived from the properties of the individual components.

Components:

2-Butoxy ethanol:

Species: Rabbit
Method: OECD Test Guideline 404
Result: irritating

2-Mercaptoethanol:

Species: Rabbit
Method: Other
Result: Skin irritation

Serious eye damage/eye irritation

Product:

Result: irritating
Remarks: This product has not been tested as a separate entity. The hazards have been evaluated based on individual ingredients.

Components:

2-Butoxy ethanol:

Species: rabbit eye
Result: irritating
Method: OECD Test Guideline 405

2-Mercaptoethanol:

Species: Rabbit
Result: Risk of serious damage to eyes.
Method: Draize Test

Respiratory or skin sensitisation

Components:

2-Mercaptoethanol:

Species: Guinea pig
Method: OECD Test Guideline 406
Result: The product is a skin sensitiser, sub-category 1A.
GLP: yes

Assessment: Toxic if swallowed., Fatal in contact with skin., Toxic if inhaled., Causes skin irritation., Causes serious eye damage.
May cause an allergic skin reaction.

Germ cell mutagenicity

Components:

2-Mercaptoethanol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mammalian cell gene mutation assay
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

2-Mercaptoethanol:

Carcinogenicity - Assessment : No information available.

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.

Reproductive toxicity

Components:

2-Mercaptoethanol:

Effects on fertility : Species: Rat, male and female
Strain: Sprague-Dawley
General Toxicity - Parent: NOAEL: 15 mg/kg body weight

Method: OECD Test Guideline 422
GLP: yes

Effects on foetal development : Species: Rat
Strain: wistar
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: 25 mg/kg body weight
Developmental Toxicity: NOAEL: 25 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

STOT - single exposure

Components:

2-Mercaptoethanol:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

2-Mercaptoethanol:

Target Organs: Liver, Heart
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

2-Mercaptoethanol:

Species: Rat, male and female
NOAEL: 15 mg/kg
Application Route: oral (gavage)
Method: OECD Test Guideline 422
GLP: yes

Repeated dose toxicity - Assessment : Toxic if swallowed., Fatal in contact with skin., Toxic if inhaled., Causes skin irritation., Causes serious eye damage.

Aspiration toxicity

Components:

2-Mercaptoethanol:

no data available

Experience with human exposure

Product:

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2-Butoxy ethanol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1,474 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,550 mg/l Exposure time: 48 h Test Type: Immobilization
Toxicity to algae	:	IC50 (Pseudokirchneriella subcapitata (microalgae)): 911 mg/l Exposure time: 72 h

2-Mercaptoethanol:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 37 mg/l Exposure time: 96 h Test Type: static test Method: Other
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.4 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): 19 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0.063 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

2-Butoxy ethanol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 90.4 %
Exposure time: 28 d

2-Mercaptoethanol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 20 mg/l
Result: Biodegradable
Biodegradation: 69 %
Exposure time: 60 d
Method: OECD Test Guideline 310
GLP: yes

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

Product:

Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : No -- Not as sold.

Waste from residues : Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

SECTION 14. TRANSPORT INFORMATION

DOT	not restricted
IATA	not restricted
IMDG	not restricted

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Respiratory or skin sensitisation

SARA 313 : This product contains the chemical or chemicals listed below which are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and the requirements of 40 CFR Part 372:

Glycol ethers (SARA 313 Category), total glycol ether compounds	Not Assigned	0 - 3 %

Clean Water Act

Contains no known priority pollutants at concentrations greater than 0.1%.

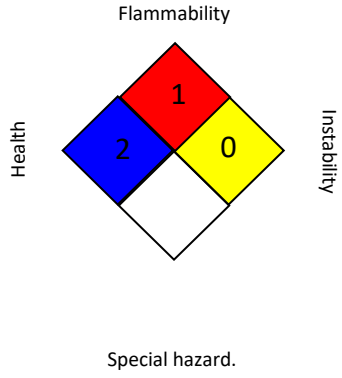
The components of this product are reported in the following inventories:

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

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

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 - 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

Do not breathe vapour.
Ensure adequate ventilation.
Do not get in eyes.
Do not get on skin.
Do not swallow.
When using do not eat, drink or smoke.

Revision Date : 05/10/2018

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