Substance key: 000000818555	Revision Date: 03/26/2020
Version : 1 - 6 / 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 16830**
Material number:	316182
Primary product use:	Industrial use
Chemical family:	Corrosion Inhibitor

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1B
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 1 (Eyes, Central nervous system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H370 Causes damage to organs (Eyes, Central nervous system).

Precautionary statements :

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
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.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing 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)
Quaternary Ammonium Compound	Not Assigned	20 - 30
Methanol	67-56-1	1 - 5
Mercaptoacetic acid	68-11-1	1 - 5

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

SECTION 4. FIRST AID MEASURES

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

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	:	Remove contaminated clothing. Flush all affected areas with large amounts of water for at least 15 minutes. Seek medical attention immediately.
In case of eye contact	:	Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.
If swallowed	:	Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical advice/ attention.
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	:	Water spray jet Alcohol-resistant foam Dry powder Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO) Carbon dioxide (CO2) Hydrogen sulfide (H2S) Sulphur oxides Nitrogen oxides (NOx) Formaldehyde
Further information	:	In the event of fire and/or explosion do not breathe fumes. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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	:	Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
Environmental precautions	:	The product should not be allowed to enter drains, water courses or the soil.
Methods and materials for containment and cleaning up	:	Prevent product from entering drains. Non-sparking tools should be used. Take measures to prevent the build up of electrostatic charge. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Observe the general rules of industrial fire protection
Advice on safe handling	:	Handle in accordance with good industrial hygiene and safety practice. For personal protection see section 8. Avoid contact with skin, eyes and clothing. Use only with adequate ventilation. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Keep away from heat, sparks and open flames. Store in proper container and keep container closed when not in use.
Further information on storage conditions	:	Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL

		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0
Mercaptoacetic acid	68-11-1	TWA	1 ppm 4 mg/m3	NIOSH REL
		TWA	1 ppm 4 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Engineering measures : A system of local and/or general exhaust is recommended where employee exposures are at or above Occupational Exposure Limits (OEL).

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Remarks : Butyl Rubber, PVC Or Neoprene.

Eye protection : Chemical splash goggles with face shield.

Skin and body protection : Dermal contact should be prevented through the use of impervious clothing, footwear, and a face shield where splattering may occur.

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	:	dark yellow
Odour	:	characteristic
Odour Threshold	:	not determined
pH	:	4.0 - 5.5
Melting point	:	< 32 °F / < 0 °C
Boiling point	:	> 149 °F / > 65 °C
Flash point	:	> 200.01 °F / > 93.34 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable
Self-ignition	:	no data available
Upper explosion limit / upper flammability limit	:	44 %(V)
Lower explosion limit / Lower flammability limit	:	5.5 %(V)
Vapour pressure	:	128 mbar
Relative vapour density	:	no data available
Relative density	:	no data available
Density	:	0.96 - 1.00 g/cm3
Bulk density	:	no data available

Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	851 °F / 455 °C
Decomposition temperature	:	no data available
Viscosity		
Viscosity, dynamic	:	< 15 mPa.s
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Self-heating substances	:	no data available
Metal corrosion rate	:	Not corrosive to metals
Minimum ignition energy	:	no data available

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 and sources of ignition.
Incompatible materials	:	not known
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact
Eye contact
Inhalation
Ingestion

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 1,143 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 69.65 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Methanol:

Acute oral toxicity	:	LD50 (Rat, male and female): 1,187 - 2,769 mg/kg Method: Other GLP: no Assessment: The component/mixture is toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat, male and female): 87.5 mg/l Exposure time: 6 h Test atmosphere: vapour Method: Other GLP: no Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	:	Assessment: The component/mixture is toxic after single contact with skin.

Mercaptoacetic acid:

Acute oral toxicity	:	LD50 (Rat, male and female): 73 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Rabbit, male and female): 848 mg/kg Method: OECD Test Guideline 402 GLP: no

Skin corrosion/irritation

Product:

Remarks: no data available

Components:

Methanol:

Species: Rabbit

Exposure time: <= 20 h
Method: Other
Result: No skin irritation
GLP: no

Mercaptoacetic acid:

Result: Causes severe burns.

Serious eye damage/eye irritation

Product:

Remarks: no data available

Components:

Methanol:

Species: Rabbit
Result: No eye irritation
Method: Other
GLP: no

Mercaptoacetic acid:

Species: Rabbit
Result: Risk of serious damage to eyes.
Method: Directive 67/548/EEC, Annex V, B.5.

Respiratory or skin sensitisation

Product:

Remarks: no data available

Components:

Methanol:

Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
GLP: no

Assessment: Toxic if swallowed, in contact with skin or if inhaled.

Mercaptoacetic acid:

Remarks: no data available

Germ cell mutagenicity

Components:

Methanol:

Genotoxicity in vitro : Test Type: Micronucleus test
Test system: Chinese hamster lung cells
Concentration: 40 mg/ml
Method: Other
Result: negative
GLP: No information available.

Test Type: HGPRT assay
Test system: Chinese hamster lung cells
Concentration: 15,8 - 63,3 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: No information available.

Test Type: In vitro gene mutation study in bacteria
Test system: Salmonella typhimurium
Concentration: 5 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Mouse (male)
Strain: C57BL/6 x DBA/2
Application Route: Inhalation
Exposure time: 5 d, 6 h/day
Dose: 1,04 - 5,3 mg/l
Method: Other
Result: negative
GLP: No information available.

Germ cell mutagenicity - Assessment : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

Mercaptoacetic acid:

Genotoxicity in vitro : Test Type: In vitro gene mutation study in bacteria
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro gene mutation study in mammalian cells
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: Regulation (EC) No. 440/2008, Annex, B.17

Result: negative
GLP: yes
Remarks: By analogy with a product of similar composition

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
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Strain: Switzerland
Application Route: Dermal
Dose: 1000, 500, 250 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: Micronucleus test
Species: Mouse (female)
Strain: Switzerland
Application Route: Dermal
Dose: 500, 250, 125 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

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

Carcinogenicity

Components:

Methanol:

Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 24
Dose: 0,013 - 0,13 - 1,3 mg/l
Group: yes
Frequency of Treatment: 20 h/day
NOAEL: >= 1.3 mg/l
Method: OECD Test Guideline 453
GLP: No information available.

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Mercaptoacetic acid:

Species: Mouse, (female)

Application Route: Dermal
Dose: 1% and 2% in acetone
Method: Other
Result: negative
GLP: no
Remarks: By analogy with a product of similar composition

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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:

Methanol:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: Inhalation
Dose: 0,013 - 0,13 - 1,3 mg/l
Duration of Single Treatment: 20 h
General Toxicity - Parent: NOAEC: 1.3 mg/l
General Toxicity F1: NOAEC: 0.13 mg/l
General Toxicity F2: NOAEC: 0.13 mg/l
Method: OECD Test Guideline 416
GLP: No information available.

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Strain: Sprague-Dawley
Application Route: Inhalation
Dose: 0,27 - 1,33 - 6,65 mg/l
Duration of Single Treatment: 22.7 h
General Toxicity Maternal: NOAEC: 1.33 mg/l
Teratogenicity: NOAEC F1: 1.33 mg/l
Method: OECD Test Guideline 414
GLP: No information available.

Test Type: Pre-natal
Species: Rat
Strain: Long-Evans

Application Route: oral (gavage)
Dose: 1027 - 2054 - 4108 mg/kg
Frequency of Treatment: 1
General Toxicity Maternal: LOAEL: 1,027 mg/kg body weight
Teratogenicity: LOAEL F1: 1,027 mg/kg body weight
Method: OECD Test Guideline 414
GLP: No information available.

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

Mercaptoacetic acid:

Effects on fertility : Test Type: One generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 0, 20, 40 or 80 mg/kg/day
General Toxicity - Parent: NOEL: 20 mg/kg body weight
General Toxicity F1: NOEL: 40 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Strain: wistar
Application Route: oral (gavage)
Dose: 3, 15 and 75 mg/kg
General Toxicity Maternal: NOAEL: 15 mg/kg body weight
Developmental Toxicity: NOAEL: 75 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: By analogy with a product of similar composition

Test Type: Pre-natal
Species: Rat
Strain: Sprague-Dawley
Application Route: Dermal
Dose: 50, 100 or 200 mg//day
General Toxicity Maternal: NOAEL: < 50 mg/kg body weight
Developmental Toxicity: NOAEL: >= 100 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: By analogy with a product of similar composition

Test Type: Pre-natal
Species: Rabbit
Strain: New Zealand white
Application Route: Dermal
Dose: 10, 15, 25 or 65 mg/kg/day
General Toxicity Maternal: NOAEL: >= 65 mg/kg body weight

Developmental Toxicity: NOAEL: >= 65 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: By analogy with a product of similar composition

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Components:

Methanol:

Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

Mercaptoacetic acid:

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

STOT - repeated exposure

Components:

Methanol:

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

Mercaptoacetic acid:

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

Repeated dose toxicity

Components:

Methanol:

Species: Monkey, male
LOAEL: 2,340 mg/kg
Application Route: oral (gavage)
Exposure time: 3 d
Number of exposures: daily
Dose: 2340 mg/kg
Group: no data available
Method: Other
GLP: No information available.
Remarks: Significant toxicity observed in testing

Species: Rat, male and female
NOEL: 0.13 mg/l
LOAEL: 1.3 mg/l

Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 12 m
Number of exposures: 20 h/day
Dose: 0,013 - 0,13 - 1,3 mg/l
Group: yes
Method: OECD Test Guideline 453
GLP: No information available.

Species: Rat, male and female
NOAEL: 6.66 mg/l
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 4 w
Number of exposures: 6 h/d, 5 d/wk
Dose: 0,663 - 2,65 - 6,63 mg/l
Group: yes
Method: OECD Test Guideline 412
GLP: No information available.

Application Route: Skin contact
Remarks: not tested.

Repeated dose toxicity - Assessment : Toxic if swallowed, in contact with skin or if inhaled.

Mercaptoacetic acid:

Species: Rat, male and female
NOEL: 7 mg/kg
NOAEL: 20 mg/kg
LOAEL: 60 mg/kg
Application Route: oral (gavage)
Exposure time: 13 weeks
Number of exposures: 7 days/week
Dose: 7, 20, 60 mg/kg bw/d
Method: OECD Test Guideline 408
GLP: yes
Remarks: By analogy with a product of similar composition

Species: Rat, male and female
NOAEL: >= 180 mg/kg
LOAEL: 11.25 mg/kg
Application Route: Dermal
Exposure time: 13 weeks
Number of exposures: 5 times/week
Dose: 11.25,22.5,45,90,180mg/kg bw/d
Method: OECD Test Guideline 411
Remarks: By analogy with a product of similar composition

Aspiration toxicity

Components:

Methanol:

No aspiration toxicity classification

Mercaptoacetic acid:

No aspiration toxicity classification

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: no data available

Toxicity to algae/aquatic plants : Remarks: no data available

Toxicity to fish (Chronic toxicity) : Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: no data available

Components:

Methanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes

Method: EPA
GLP: No information available.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 18,260 mg/l
End point: Immobilization
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: no data available
Method: OECD Test Guideline 202
GLP: No information available.
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (microalgae)): ca. 22,000 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no data available
Method: OECD Test Guideline 201
GLP: No information available.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 446.7 mg/l
Exposure time: 28 d
Method: Other
GLP: no
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 208 mg/l
End point: Reproduction rate
Exposure time: 21 d
Method: calculated
GLP: no
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to microorganisms : IC50 (activated sludge): > 1,000 mg/l
End point: Bacteria toxicity (growth inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: yes
Method: OECD Test Guideline 209
GLP: No information available.

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1 mg/cm2
Exposure time: 48 h
End point: mortality
Method: OECD Test Guideline 207
GLP: No information available.

NOEC (Folsomia candida): 10000 mg/kg dry weight (d.w.)
Exposure time: 28 d
End point: mortality
Method: Other
GLP: No information available.

Plant toxicity : IC50: ca. 41,000 mg/l
Exposure time: 3 d
End point: emergence
Species: Lactuca sativa (lettuce)
Analytical monitoring: no data available
Method: Other
GLP: no

Sediment toxicity : Remarks: Not applicable

Mercaptoacetic acid:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 38 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): 13 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

EC50 (Pseudokirchneriella subcapitata (algae)): 27 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to fish (Chronic toxicity) : Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: no data available

(Chronic toxicity)

Toxicity to microorganisms : EC50 (activated sludge): 530 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition

NOEC (activated sludge): 32 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition

Persistence and degradability

Product:

Biodegradability : Remarks: Not applicable

Components:

Methanol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 3 - 10 mg/l
Biochemical Oxygen Demand (BOD)
Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 20 d
Method: Closed Bottle test
GLP: no

aerobic
Inoculum: activated sludge
Concentration: 4 - 200 g/l
Biochemical Oxygen Demand (BOD)
Result: Readily biodegradable.
Biodegradation: 82.7 %
Exposure time: 5 d
Method: Other
GLP: no

Photodegradation : Rate constant: 9.32E-13 cm3/s
Degradation (indirect photolysis): 50 % Degradation half life: 17.2 d
GLP: no

Mercaptoacetic acid:

Biodegradability : aerobic

Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 67 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: no data available

Components:

Methanol:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10
Exposure time: 72 h
Method: Other
GLP: No information available.

Partition coefficient: n-octanol/water : log Pow: -0.77
Method: No information available.
GLP: No information available.

Mercaptoacetic acid:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: -2.99 (72 °F / 22 °C)
pH: 7
Method: OECD Test Guideline 107

Mobility in soil

Components:

Methanol:

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
Koc: 1
Method: other (calculated)

Other adverse effects

Product:

Additional ecological information : no data available

Components:

Methanol:

Environmental fate and pathways	:	not available
Results of PBT and vPvB assessment	:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Additional ecological information	:	Do not allow to enter ground water, waterways or waste water.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	Yes -- If it becomes a waste as sold.
Waste Code	:	D001
Waste from residues	:	Dispose of this product in accordance with all applicable local, state and federal regulations.
Contaminated packaging	:	Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14. TRANSPORT INFORMATION

DOT Regulation:

UN/NA-number:	UN 2735
Proper shipping name:	Amines, liquid, corrosive, n.o.s.
Technical Name:	QUATERNARY AMMONIUM COMPOUND
Primary hazard class:	8
Packing group:	II
Reportable Quantity:	11,350.000 kg Methanol
Emergency Response Guide:	132

IATA

UN/ID number:	UN 2735
Proper shipping name:	Amines, liquid, corrosive, n.o.s.
Hazard inducer(s):	QUATERNARY AMMONIUM COMPOUND
Primary risk:	8
Packing group:	II
Remarks:	Shipment permitted

IMDG

UN no.:	UN 2735
Proper shipping name:	Amines, liquid, corrosive, n.o.s.
Hazard inducer(s):	QUATERNARY AMMONIUM COMPOUND
Hazard inducer / Marine pollutant:	QUATERNARY AMMONIUM COMPOUND
Primary risk:	8
Packing group:	II
Marine pollutant:	Marine Pollutant
EmS:	F-A S-B

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.
A characteristic waste RQ of 100 lbs applies to this product in a waste form: D001

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 : Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol 67-56-1 1 - 5 %

Clean Water Act

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

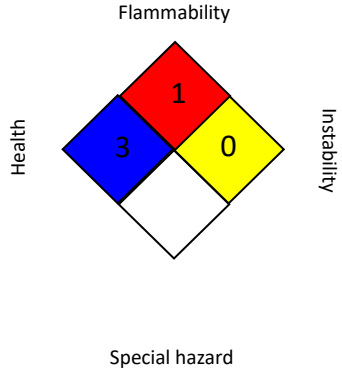
The components of this product are reported in the following inventories:

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

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
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
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / 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 - 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

Revision Date : 03/26/2020

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