SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

ROZONE™ 2000 Mildewcide

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3.0	06/10/2025	203000022100	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ROZONE™ 2000 Mildewcide

Product code : 000000000062633585

EPA registration number : 707-262

Manufacturer or supplier's details

Company : LANXESS Corporation
Product Safety & Regulatory Affairs
111 RIDC Park West Drive
Pittsburgh, Pennsylvania 15275-1112

Responsible Department : (800) LANXESS
(412) 809-1000
lanxesshes@lanxess.com

Emergency telephone : CHEMTREC (800) 424-9300 or
(703) 527-3887 (Outside U.S.A) and mention CCN12916.
Lanxess Emergency Phone (800) 410-3063.

Recommended use of the chemical and restrictions on use

Recommended use : Biocide for industrial application

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Skin corrosion : Category 1

Serious eye damage : Category 1

Skin sensitization : Category 1

Other hazards

None known.

GHS label elements

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H331 Toxic if inhaled.
Supplemental Hazard Statements	:	Corrosive to the respiratory tract.
Precautionary Statements	:	**Prevention:** P261 Avoid breathing mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing 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. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse. **Storage:** P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. **Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)
1-phenoxypropan-2-ol	770-35-4*	>= 45 - <= 70
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5*	>= 10 - <= 30
Benzenesulfonic acid, C10-16-alkyl derivs.	68584-22-5*	>= 5 - <= 10
copper dihydroxide	20427-59-2*	>= 0.5 - <= 1.5

* Indicates that the identifier is a CAS No.
Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Get medical attention.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

In case of skin contact : Get medical attention immediately.
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Continue to rinse for 30 minutes.
Chemical burns must be treated promptly by a physician.
Wash contaminated clothing before reuse.

In case of eye contact : Get medical attention immediately.
In case of contact, flush eyes with plenty of water for at least 30 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.
Remove contact lenses, if present and easy to do. Continue rinsing.
Chemical burns must be treated promptly by a physician.

If swallowed : Rinse mouth with water.
Do not induce vomiting unless directed to do by medical personnel.

If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
If unconscious, place in recovery position and get medical attention immediately.
Never give anything by mouth to an unconscious person.
Maintain open airway.

Most important symptoms and effects, both acute and delayed

Symptoms : Acute overexposure to this product may cause dizziness, headache, drowsiness, malaise, abdominal pain.
Eye: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
Skin: Reddening, burning, and possible permanent damage.
Skin: Causes irritation with symptoms of reddening, itching, and swelling.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

Effects : Harmful if swallowed.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic if inhaled.
Causes severe burns.
Corrosive to the respiratory tract.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO2)
Carbon monoxide
Nitrogen oxides (NOx)
Sulfur oxides
Halogenated compounds
Metal oxides

Further information	:	Cool containers/tanks with water spray. Minimize exposure. Do not breathe fumes. Contain run-off.
Special protective equipment for fire-fighters	:	Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear a NIOSH approved (or equivalent) respirator (with organic vapor/acid gas cartridge and a dust/mist filter) during spill clean-ups and deactivation of this material. MATERIAL IS CORROSIVE. Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of this material. If material comes in contact with the skin during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.
Environmental precautions	:	Do not allow material to contaminate ground water system. Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for recovery or disposal. Wipe contaminated area with TEXANOL(R) (2,2,4-trimethyl-1,3-pentanediol monoisobutyrate) or butyl CARBITOL(R)(diethylene glycol monobutyl ether) using a clean rag(s) or disposable pad(s) or mop(s). Isopropanol can also be used, but special care should be taken due to the flammability of this solvent. Discard contaminated wiping materials into suitable containers for recovery or disposal. Decontaminate spill area with a freshly prepared aqueous solution of 10% sodium thiosulfate. Let stand for 30 minutes. Rinse decontamination solution to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add decontamination solution to the waste pail to deactivate the adsorbed product. See SECTION 13, Disposal Considerations, for information regarding the disposal of contained spills. TEXANOL(R) is a trademark of Eastman Chemical Co. CARBITOL(R) is a trademark of Union Carbide Co.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	This material is corrosive. See SECTION 8, Exposure Controls/Personal Protection, prior to handling. For personal protection see section 8. Do not handle material near food, feed or drinking water.
Conditions for safe storage	:	Keep from freezing. Keep in a well-ventilated place. Do not store this material in containers made of the following: steel Do not store near food, feed or fertilizers.
Further information on storage conditions	:	CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20ºC-25ºC (68ºF-77ºF).
Recommended storage temperature	:	50 - 109 °F / 10 - 43 °C
Further information on storage stability	:	Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Personal protective equipment

Respiratory protection	:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing appartus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand

mode with emergency escape provision.
Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and R95 or P95 filters.

Hand protection

Remarks	:	Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl-rubber Nitrile rubber Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. NOTE: Material is a possible skin sensitizer.
Eye protection	:	Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.
Skin and body protection	:	Impervious clothing
Protective measures	:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Physical state	:	liquid
Color	:	green
Odor	:	Mild odor

Odor Threshold	:	No data available
pH	:	2.8 Concentration: 10 % Aqueous solution
Melting point/ range	:	5 °F / -15 °C
Boiling point/boiling range	:	469.40 °F / 243.00 °C Solvent
Flash point	:	240.80 °F / 116.00 °C Tag closed cup solvent
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	ca. 9.40 %(V)
Lower explosion limit / Lower flammability limit	:	ca. 0.70 %(V)
Vapor pressure	:	0.1 mmHg
Relative vapor density	:	ca. 53.0000
Relative density	:	1.09 (77 °F / 25 °C)
Density	:	1.09 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	slightly soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: 2.8 Method: OECD Test Guideline 107
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	58 mPa·s (77 °F / 25 °C)

Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. Hazardous polymerization does not occur.
Conditions to avoid	:	No data available
Incompatible materials	:	Avoid contact with the following: Amines Reducing agents mercaptan
Hazardous decomposition products	:	Nitrogen oxides (NOx) Sulfur oxides hydrogen chloride

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Ingestion
Eye contact
Skin contact

Acute toxicity

Harmful if swallowed.
Toxic if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): 978 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.758 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Components:

1-phenoxypropan-2-ol:

Acute oral toxicity : LD50 (Rat): 2,830 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 (Rat, male and female): 1,585 mg/kg
Method: OECD Test Guideline 401
GLP: Yes

Acute inhalation toxicity : LC50 (Rat, male and female): 0.26 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: Yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 652 mg/kg
Method: OECD Test Guideline 402
GLP: Yes
Assessment: The component/mixture is moderately toxic after single contact with skin.
Remarks: No deaths occurred at this concentration.

Benzenesulfonic acid, C10-16-alkyl derivs.:

Acute oral toxicity : LD50 (Rat, male and female): 1,470 mg/kg
Method: OECD Test Guideline 401
GLP: Yes
Remarks: Test results on an analogous substance/product.

Acute dermal toxicity : LD50 (Rabbit): 2,000 mg/kg
Remarks: The toxicity is determined by the caustic effect of the product.

copper dihydroxide:

Acute oral toxicity : LD50 (Rat, male): 878 mg/kg

LD50 (Rat, female): 657 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0.451 mg/l
Exposure time: 4 hrs
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes severe burns.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 1 to 4 hours of exposure

Benzenesulfonic acid, C10-16-alkyl derivs.:

Assessment	:	Corrosive

copper dihydroxide:

Remarks	:	Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Species	:	Rabbit
Result	:	Corrosive

Components:

1-phenoxypropan-2-ol:

Result	:	Eye irritation

copper dihydroxide:

Result	:	Corrosive
Remarks	:	May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Product:

Species	:	Guinea pig
Result	:	Causes sensitization.
Remarks	:	For respiratory sensitization: No relevant data found.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	The product is a skin sensitizer, sub-category 1A.
GLP	:	Yes

copper dihydroxide:

Remarks	:	Did not cause allergic skin reactions when tested in guinea pigs.
Remarks	:	For respiratory sensitization: No relevant data found.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

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 GLP: Yes Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: Yes Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells 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 and female) Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative GLP: Yes

Carcinogenicity

Not classified due to lack of data.

IARC	No ingredient 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 ingredient 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

Not classified due to lack of data.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 200 - 400 - 800 parts per million
General Toxicity Parent: NOAEL: 400 ppm
General Toxicity F1: NOAEL: 400 ppm
General Toxicity F2: NOAEL: 200 ppm
Fertility: NOAEL: 800 ppm
Method: OPPTS 870.3800
Result: Animal testing did not show any effects on fertility.
GLP: Yes

Effects on fetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Dose: 10 - 30 - 100 - 300 milligram per kilogram
General Toxicity Maternal: NOAEL: 30 mg/kg bw/day
Teratogenicity: NOAEL: 100 mg/kg bw/day
Method: OECD Test Guideline 414
GLP: Yes

STOT-single exposure

Corrosive to the respiratory tract.

Product:

Assessment : Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Routes of exposure : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

Benzenesulfonic acid, C10-16-alkyl derivs.:

Assessment : Material is corrosive. Upper respiratory tract irritation or corrosivity may be expected.

copper dihydroxide:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

STOT-repeated exposure

Not classified due to lack of data.

Repeated dose toxicity

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Species	:	Rat, male and female
NOAEL	:	20 mg/kg
LOAEL	:	100 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	20 - 100 - 500 mg/kg bw/day
GLP	:	Yes
Remarks	:	Subacute toxicity

Species	:	Rat, male and female
NOAEL	:	500 ppm
LOAEL	:	1000 ppm
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Dose	:	100 - 500 - 1000 - 4000 parts per million
Method	:	OECD Test Guideline 408
GLP	:	Yes
Remarks	:	Subchronic toxicity

Species	:	Dog, male and female
NOAEL	:	300 ppm
LOAEL	:	1500 ppm
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	2 hours/day
Dose	:	100 - 300 - 1500 parts per million
Method	:	OECD Test Guideline 409
GLP	:	Yes
Remarks	:	Subchronic toxicity

copper dihydroxide:

Remarks : In animals, effects have been reported on the following organs:
Liver

Kidney
lung effects

Aspiration toxicity

Not classified due to lack of data.

Components:

Benzenesulfonic acid, C10-16-alkyl derivs.:

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

copper dihydroxide:

Based on physical properties, not likely to be an aspiration hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0027 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Active ingredient LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.014 mg/l Exposure time: 96 h Remarks: Active ingredient
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.0052 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Active ingredient
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0.027 mg/l End point: Growth rate Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Active ingredient EC50 (Pseudokirchneriella subcapitata (green algae)): 0.0419 mg/l End point: Growth rate Exposure time: 72 h Method: OECD Test Guideline 201

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0027 mg/l
Exposure time: 96 h
Test Type: flow-through test
GLP: Yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0052 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: flow-through test
GLP: Yes
Remarks: Fresh water

LC50 (Mysidopsis bahia (opossum shrimp)): 0.0047 mg/l
Exposure time: 96 h
Test Type: flow-through test
GLP: Yes
Remarks: salt water

Toxicity to algae/aquatic plants : ErC50 (Navicula pelliculosa (Freshwater diatom)): 0.0016 mg/l
End point: Growth rate
Exposure time: 24 h
Test Type: Static
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

NOEC(r) (Navicula pelliculosa (Freshwater diatom)): 0.00034 mg/l
End point: Growth rate
Exposure time: 24 h
Test Type: Static
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.00056 mg/l
End point: Growth
Exposure time: 97 d
Test Type: flow-through test
Method: OECD Test Guideline 210
GLP: Yes
Remarks: Fresh water

NOEC (Cyprinodon variegatus (sheepshead minnow)): 0.006 mg/l
Exposure time: 35 d
Test Type: flow-through test
GLP: Yes
Remarks: salt water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.00063 mg/l Exposure time: 21 d GLP: Yes Remarks: Fresh water NOEC (Mysidopsis bahia (opossum shrimp)): 0.00063 mg/l Exposure time: 28 d Test Type: flow-through test Method: OPPTS 850.1350 GLP: Yes Remarks: salt water
Toxicity to microorganisms	:	EC50 (activated sludge): > 5.70 mg/l End point: Respiration inhibition Exposure time: 3 h Method: OECD Test Guideline 209 GLP: Yes

Benzenesulfonic acid, C10-16-alkyl derivs.:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 1.67 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: Yes GLP: No Remarks: Test results on an analogous substance/product.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.4 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: Yes Method: EPA-660/3-75-009 GLP: Yes Remarks: Test results on an analogous substance/product.
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 7.39 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: Yes Method: OECD Test Guideline 201 GLP: No Remarks: Test results on an analogous substance/product. NOEC (algae): 0.35 mg/l Exposure time: 96 h NOEC (Chlorella kessleri (green alga)): 3.1 mg/l Exposure time: 15 d Test Type: static test Analytical monitoring: No information available. Method: EPA-600/9-78-018 GLP: Yes Remarks: nominal concentration

Test results on an analogous substance/product.

Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l End point: mortality Exposure time: 72 d Test Type: flow-through test Analytical monitoring: Yes Method: OECD Test Guideline 210 GLP: No Remarks: Test results on an analogous substance/product.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Ceriodaphnia dubia (Water flea)): 0.59 mg/l Exposure time: 7 d

copper dihydroxide:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0.0384 mg/l Exposure time: 96 hrs Test Type: flow-through
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.026 mg/l Exposure time: 48 hrs Method: Method Not Specified.
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.047 mg/l Exposure time: 72 hrs
Toxicity to fish (Chronic toxicity)	:	NOEC: > 1 - 10 µg/l Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 1 - 10 µg/l Remarks: Based on data from similar materials

Persistence and degradability

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Biodegradability	:	Method: Simulation study Remarks: Biodegradation (Aquatic metabolism) CAS # 64359-81-5 t 1/2 anaerobic = < 1hr. CAS # 64359-81-5 t 1/2 aerobic = < 1hr. Remarks: Considered rapidly degradable in the environment. Remarks: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Result: Not readily biodegradable.

Method: OECD Test Guideline 301B
GLP: Yes

Stability in water : Degradation half life (DT50): 71.4 d (25 °C) pH: 7
Method: OECD Test Guideline 111
GLP: Yes

Benzenesulfonic acid, C10-16-alkyl derivs.:

Biodegradability : Result: Readily biodegradable.

copper dihydroxide:

Biodegradability : Result: Not biodegradable
Remarks: No appreciable biodegradation is expected.

Bioaccumulative potential

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 13

Partition coefficient: n-octanol/water : log Pow: 2.8 (73 °F / 23 °C)
pH: 7
Method: OECD Test Guideline 107

Benzenesulfonic acid, C10-16-alkyl derivs.:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2 (73 °F / 23 °C)
pH: 3.7

copper dihydroxide:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 3.16

Partition coefficient: n-octanol/water : log Pow: -0.87
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Mobility in soil

Components:

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Distribution among environmental compartments : Koc: 5662 - 7865
Method: measured

Benzenesulfonic acid, C10-16-alkyl derivs.:

Distribution among environmental compartments : Remarks: No relevant data found.

copper dihydroxide:

Distribution among environmental compartments : Koc: 21.73
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

Components:

copper dihydroxide:

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).
Substance is not very persistent and very bioaccumulative (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste from residues : The generation of waste should be avoided or minimized wherever possible.
This material and its container must be disposed of in a safe way.
Empty containers retain product residue; observe all precautions for product.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3265

Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (4,5-DICHLORO-2-OCTYL-2H-ISOTHIAZOL-3-ONE, BENZENESULFONIC ACID, C10-16-ALKYL DERIVS.)
Class	:	8
Packing group	:	III
Labels	:	8
	:	
Packing instruction (cargo aircraft)	:	856: 60.00 L
Packing instruction (passenger aircraft)	:	852: 5.00 L
Environmentally hazardous	:	yes
		

IMDG-Code

UN number	:	UN 3265
UN proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (4,5-DICHLORO-2-OCTYL-2H-ISOTHIAZOL-3-ONE, BENZENESULFONIC ACID, C10-16-ALKYL DERIVS.)
Class	:	8
Packing group	:	III
Labels	:	8
	:	
EmS Code	:	F-A, S-B
Marine pollutant	:	yes
		

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (4,5-DICHLORO-2-OCTYL-2H-ISOTHIAZOL-3-ONE, BENZENESULFONIC ACID, C10-16-ALKYL DERIVS.)
Class	:	8
Packing group	:	III

Labels : 8
:

ERG Code : 153
Marine pollutant : no

Hazard and Handling Notes
Slightly corrosive.
Environmentally hazardous substance.
Keep separated from foodstuffs

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the 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)
Respiratory or skin sensitization
Skin corrosion or irritation
Serious eye damage or eye irritation

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

copper dihydroxide	20427-59-2	>= 1 - < 5 %

US State Regulations

Massachusetts Right To Know

sulphuric acid	7664-93-9
Hydrochloric Acid	7647-01-0
sulphur dioxide	7446-09-5

Pennsylvania Right To Know

1-phenoxypropan-2-ol	770-35-4
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5
Propylene glycol	57-55-6

Benzenesulfonic acid, C10-16-alkyl derivs.	68584-22-5
(methyl-2-phenoxyethoxy)propanol	51730-94-0
copper dihydroxide	20427-59-2
sulphuric acid	7664-93-9
methanol	67-56-1
acetic acid	64-19-7
Hydrochloric Acid	7647-01-0
ethyl acetate	141-78-6

California Prop. 65

WARNING: This product can expose you to chemicals including sulphuric acid, which is/are known to the State of California to cause cancer, and
methanol, sulphur dioxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

TSCA inventory

TSCA : This product is regulated under the United States Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

FIFRA information

EPA registration number : 707-262

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

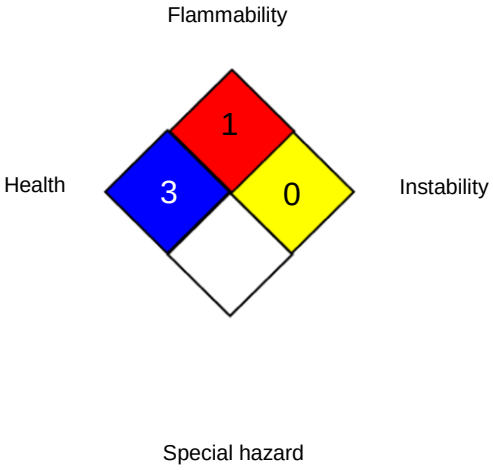
Signal Word : DANGER

Hazard Statements : Corrosive Causes irreversible eye damage and skin burns. May cause allergic skin reaction. Harmful if swallowed. May be fatal if inhaled. May be fatal if absorbed through skin.

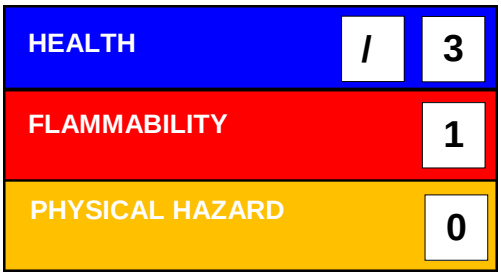
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Con-

trol Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 06/10/2025

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.

US / EN