

TERMIX® 5484

Version 1.0 Revision Date: 10/21/2015 SDS Number: 400001007580 Date of last issue: -
Date of first issue: 10/21/2015

SECTION 1. IDENTIFICATION

Product name : TERMIX® 5484

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : TechInfo: (281) 719-7780

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Surfactant

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Corrosive to Metals : Category 1
Skin corrosion : Category 1A
Serious eye damage : Category 1
Specific target organ systemic toxicity - single exposure : Category 2 (Central nervous system, Kidney)
Specific target organ systemic toxicity - repeated exposure : Category 2 (Central nervous system, Kidney, Liver)
Acute aquatic toxicity : Category 2

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

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H318 Causes serious eye damage.
H371 May cause damage to organs (Central nervous system, Kidney).
H373 May cause damage to organs (Central nervous system, Kidney, Liver) through prolonged or repeated exposure.
H401 Toxic to aquatic life.

Precautionary Statements**: Prevention:**

P234 Keep only in original container.
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.
P273 Avoid release to the environment.
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 or doctor/ physician.
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 or doctor/ physician.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage:

P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

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

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-hydroxy-, mono-C10-12-alkyl ethers, phosphates	68908-64-5	30 - 60
sodium hydroxide	1310-73-2	7 - 13
Glycol	-	7 - 13
Ethanol, 2,2',2''-nitrilotris-	102-71-6	3 - 7

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Alcohols, C10-12, Ethoxylated	67254-71-1	3 - 7
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SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 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 : No hazardous combustion products are known

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- Specific extinguishing methods : No data is available on the product itself.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Evacuate personnel to safe areas.
Ensure adequate ventilation.
In case of inadequate ventilation wear respiratory protection.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from water.
Keep away from oxidizing agents.
Keep away from strong acids.

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Keep away from strong bases.
Keep away from metals.
Keep away from combustible material.

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

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sodium hydroxide	1310-73-2	C	2 mg/m3	ACGIH
		TWA	2 mg/m3	OSHA Z-1
		C	2 mg/m3	OSHA PEL
Ethanol, 2,2',2''-nitritoltris-	102-71-6	TWA	5 mg/m3	ACGIH

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C10-12-alkyl ethers, phosphates	68908-64-5
Diethylene glycol	111-46-6
Alcohols, C10-12, Ethoxylated	67254-71-1

Personal protective equipment

- Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection
Remarks : Impervious gloves
The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles.
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.
- Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : amber, clear

Odor : neutral

Odor Threshold : No data is available on the product itself.

pH : 5 - 7

Melting point : -23 °C

Boiling point : > 100 °C

Flash point : > 280 °C
Method: closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapor pressure : No data is available on the product itself.

Relative vapor density : No data is available on the product itself.

Relative density : 1.17

Density : No data is available on the product itself.

Solubility(ies)

Water solubility : soluble

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-octanol/water : No data is available on the product itself.

Autoignition temperature : No data is available on the product itself.

Thermal decomposition : No data is available on the product itself.

Viscosity

Viscosity, kinematic : 179 mm²/s (40 °C)

Self-Accelerating : No data is available on the product itself.

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decomposition temperature
(SADT)

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Conditions to avoid : No data available

Hazardous decomposition products : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)
Oxides of phosphorus
Metal oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 4,803 mg/kg
Method: Calculation method

Ingredients:

Alcohols, C10-12, Ethoxylated:
Acute inhalation toxicity : LC50 (Rat): > 1600 mg/m³
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity - Product : LD50 (Rabbit): > 2,000 mg/kg

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Product:**

Species: Rabbit

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation**Product:**

Species: Rabbit

Remarks: May cause irreversible eye damage.

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Respiratory or skin sensitization**Ingredients:**

sodium hydroxide:

Routes of exposure: Skin

Species: Humans

Result: Does not cause skin sensitization.

Glycol:

Routes of exposure: Skin

Species: Guinea pig

Method: Directive 67/548/EEC, Annex V, B.6.

Result: Does not cause skin sensitization.

Ethanol, 2,2',2''-nitrilotris-:

Routes of exposure: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitization.

Alcohols, C10-12, Ethoxylated:

Routes of exposure: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitization.

Assessment: No data available

Germ cell mutagenicity**Ingredients:**

sodium hydroxide:

Genotoxicity in vitro : Result: negative

Ethanol, 2,2',2''-nitrilotris-:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Concentration: 0 - 1500 µg/L

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Alcohols, C10-12, Ethoxylated:

Genotoxicity in vitro : Concentration: .1 - 2.5 mg/ml

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Concentration: 1.5 - 5000 ug/plate

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Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: .03 - 10 mg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: .2 - 2000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Concentration: 5 - 50 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Ingredients:

Glycol:

Genotoxicity in vivo

: Cell type: Somatic
Application Route: Intraperitoneal injection
Dose: 500 - 2000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity**Ingredients:**

Glycol:

Species: Rat, (male and female)

Application Route: Oral

Exposure time: 108 weeks

Dose: 1160 - 1210 mg/kg

Frequency of Treatment: 7 daily

Result: negative

Ethanol, 2,2',2''-nitrotris-:

Species: Rat, (male and female)

Application Route: Dermal

Exposure time: 103 weeks

Dose: 250 mg/kg

Frequency of Treatment: 5 daily

Method: OECD Test Guideline 451

Result: negative

Alcohols, C10-12, Ethoxylated:

Species: Rat, (male and female)

Application Route: Oral

Exposure time: 24 month(s)

Dose: 500 mg/kg

Result: negative

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Carcinogenicity - Assessment : No data available

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 ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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**Ingredients:**

Ethanol, 2,2',2''-nitrotris-:
Effects on fertility

: Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 416

Alcohols, C10-12, Ethoxylated:

Species: Rat, male and female
Application Route: Dermal
Target Organs: Heart
Method: OECD Test Guideline 416

Target Organs: Liver

Target Organs: Lungs

Target Organs: Kidney

Target Organs: Testes

Species: Rat, male and female
Application Route: Oral
Target Organs: Liver
GLP: yes

Ingredients:

Glycol:

Effects on fetal development

: Species: Rabbit
Application Route: Oral
Dose: 1000 milligram per kilogram
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Ethanol, 2,2',2''-nitrotris-:

Species: Rat, male and female
Application Route: Oral
General Toxicity Maternal: NOAEL (No observed adverse effect level): > 1,000 mg/kg body weight

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Method: OECD Test Guideline 421
Result: No teratogenic effects.

Species: Rat
Application Route: Dermal
General Toxicity Maternal: NOAEL (No observed adverse effect level): 75 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Species: Rabbit
Application Route: Dermal
General Toxicity Maternal: NOAEL (No observed adverse effect level): 10 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Alcohols, C10-12, Ethoxylated:

Species: Rat, male and female
Application Route: Dermal
General Toxicity Maternal: NOAEL (No observed adverse effect level): > 250 mg/kg body weight
Method: OECD Test Guideline 416
Result: No teratogenic effects.

Reproductive toxicity - Assessment : No data available

STOT-single exposure**Ingredients:**

Glycol:
Target Organs: Central nervous system, Kidney
Assessment: May cause damage to organs.

STOT-repeated exposure**Ingredients:**

Glycol:
Target Organs: Kidney, Liver, Central nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity**Ingredients:**

Glycol:
Species: Rat, male and female
No-observed-effect level: 150 mg/kg
Application Route: Ingestion
Exposure time: 28 Days
Method: Subacute toxicity

Ethanol, 2,2',2''-nitrilotris-:

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Species: Rat, male and female
NOEC: 1000 mg/kg, 500 mg/m³
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 672 h
Method: OECD Test Guideline 412

Species: Rat, male and female
NOEC: 125 - 500 mg/kg, 420 mg/m³
Application Route: Skin contact
Test atmosphere: dust/mist
Exposure time: 2,160 h
Number of exposures: 6 h
Method: Subchronic toxicity

Alcohols, C10-12, Ethoxylated:
Species: Rat, male and female
NOAEL (No observed adverse effect level): \geq 500 mg/kg/d
Application Route: Ingestion
Exposure time: 2,160 h
Method: Subchronic toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

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Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:**

sodium hydroxide:

Toxicity to fish : LC50: 45.4 mg/l
Exposure time: 96 h

Glycol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 75,200 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Remarks: Toxic to aquatic organisms.

Ethanol, 2,2',2''-nitrilotris-:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 11,800 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water

Alcohols, C10-12, Ethoxylated:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 1.2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.1.**Ingredients:**

sodium hydroxide:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia (water flea)): 40.4 mg/l
Exposure time: 48 h

Glycol:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38412

Ethanol, 2,2',2''-nitrilotris-:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (Water flea)): 609.88 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water

Alcohols, C10-12, Ethoxylated:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.5 mg/l
Exposure time: 48 h
Test Type: static test

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Test substance: Fresh water

Ingredients:

Ethanol, 2,2',2''-nitrilotris-:
Toxicity to algae

: ErC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 512 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38412

Alcohols, C10-12, Ethoxylated:
Toxicity to algae

: ErC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 1.8 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
GLP: yes

M-Factor (Acute aquatic toxicity)

: No data available

Ingredients:

Glycol:
Toxicity to fish (Chronic toxicity)

: NOEC (Pimephales promelas (fathead minnow)): 15,380 mg/l
Exposure time: 17 d
Test substance: Fresh water

Alcohols, C10-12, Ethoxylated:
Toxicity to fish (Chronic toxicity)

: EC20 (Pimephales promelas (fathead minnow)): 2.24 mg/l
Exposure time: 30 d
Test substance: Fresh water

Ingredients:

Glycol:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: NOEC (Ceriodaphnia (water flea)): 8,590 mg/l
Exposure time: 7 d
Test Type: static test
Test substance: Fresh water

Ethanol, 2,2',2''-nitrilotris-:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 16 mg/l
Exposure time: 21 d
Test Type: semi-static test
Test substance: Fresh water

Alcohols, C10-12, Ethoxylated:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: EC20 (Daphnia magna (Water flea)): 2.83 mg/l
Exposure time: 21 d
Test substance: Fresh water

M-Factor (Chronic aquatic toxicity)

: No data available

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Ingredients:

Glycol:

Toxicity to bacteria : IC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ethanol, 2,2',2''-nitritoltris-:

Toxicity to bacteria : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 209

Alcohols, C10-12, Ethoxylated:

Toxicity to bacteria : EC50 (activated sludge): 140 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water
GLP:

Ingredients:

Alcohols, C10-12, Ethoxylated:

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 336 h
Test substance: Synthetic
Method: OECD Test Guideline 207
GLP: yes

Ingredients:

Alcohols, C10-12, Ethoxylated:

Plant toxicity : NOEC: \geq 100 mg/kg
Exposure time: 456 h
Test substance: Natural
Method: Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test
GLP: yes

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Further information:
No data available

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Persistence and degradability**Ingredients:**

Glycol:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: $\geq 70\%$
Exposure time: 10 - 29 d

Ethanol, 2,2',2''-nitrilotris-:

Biodegradability : Inoculum: activated sludge
Concentration: 5.7 mg/l
Result: Readily biodegradable.
Biodegradation: ca. 100 %
Exposure time: 5 d

Alcohols, C10-12, Ethoxylated:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Biochemical Oxygen Demand (BOD) : No data available

Ingredients:

Ethanol, 2,2',2''-nitrilotris-:

Chemical Oxygen Demand (COD) : 1600 mgO₂/g
BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential**Ingredients:**

Glycol:

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Bioaccumulation : Species: Leuciscus idus (Golden orfe)
 Bioconcentration factor (BCF): 100
 Exposure time: 3 d
 Test substance: Fresh water
 Method: OECD Test Guideline 305

Ethanol, 2,2',2''-nitritoltris-:
 Bioaccumulation : Species: Cyprinus carpio (Carp)
 Bioconcentration factor (BCF): < 3.9
 Exposure time: 42 d
 Test substance: Fresh water
 Method: flow-through test

Alcohols, C10-12, Ethoxylated:
 Bioaccumulation : Species: Pimephales promelas (fathead minnow)
 Bioconcentration factor (BCF): 12.7
 Exposure time: 3 d
 Test substance: Fresh water
 Method: flow-through test
 Remarks: Does not bioaccumulate.

Ingredients:

Glycol:
 Partition coefficient: n-
 octanol/water : log Pow: -1.98

 log Pow: -1.98 (25 °C)
 Method: No information available.

Ethanol, 2,2',2''-nitritoltris-:
 Partition coefficient: n-
 octanol/water : log Pow: -2.3 (25 °C)
 pH: 7.1

Alcohols, C10-12, Ethoxylated:
 Partition coefficient: n-
 octanol/water : log Pow: 3.93 (25 °C)

Mobility in soil

Mobility : No data available

Ingredients:

Ethanol, 2,2',2''-nitritoltris-:
 Distribution among : Koc: 18.
 environmental compartments
 Alcohols, C10-12, Ethoxylated:
 Distribution among : Koc: 4301.18.
 environmental compartments
 Stability in soil : No data available

Other adverse effects

Environmental fate and : No data available
 pathways

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Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information - Product : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International Regulation****IATA**

Not regulated as a dangerous good

IMDG

Not regulated as a dangerous good

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

Not applicable for product as supplied.

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Domestic regulation**DOT Classification**

UN/ID/NA number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S.
 (SODIUM HYDROXIDE)
 Class : 9
 Packing group : III
 Labels : CLASS 9
 ERG Code : 171
 Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know**CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM HYDROXIDE	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

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

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Diethylene glycol 111-46-6 9.6 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

2,2'-iminodiethanol 111-42-2
arsenic 7440-38-2

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

TSCA : On TSCA Inventory
 DSL : All components of this product are on the Canadian DSL.
 AICS : On the inventory, or in compliance with the inventory

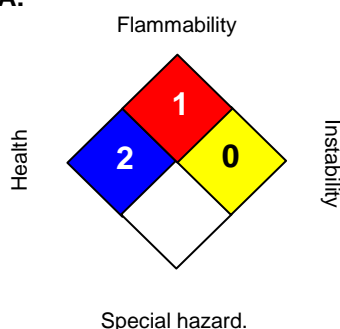
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IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information****NFPA:****HMIS III:**

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL

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REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.