

SAFETY DATA SHEET

NOROX[®] 802-75-AL3



Version 4.1 Revision Date: 10/27/2021 SDS Number: 600000000796 Date of last issue: 11/11/2020
Date of first issue: 03/05/2019

SECTION 1. IDENTIFICATION

Trade name : NOROX[®] 802-75-AL3

Manufacturer or supplier's details

Company name of supplier : United Initiators, Inc.

Address : 555 Garden Street
Elyria OH 44035 USA

Telephone : +1-440-323-3112

Telefax : +1-440-323-2659

Emergency telephone : CHEMTREC US (24h): +1-800-424-9300
CHEMTREC WORLD (24h): +1-703-527-3887

E-mail address of person responsible for the SDS : cs-initiators.nafta@united-in.com

Recommended use of the chemical and restrictions on use

Recommended use : polymerization initiators

SECTION 2. HAZARDS IDENTIFICATION

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

Flammable liquids : Category 4

Organic peroxides : Type C

Skin sensitization : Category 1

Reproductive toxicity : Category 1B

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

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Hazard pictograms

:



Signal Word

:

Danger

Hazard Statements

:

H227 Combustible liquid.
H242 Heating may cause a fire.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H360F May damage fertility.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
P234 Keep only in original container.
P261 Avoid breathing mist or vapors.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P391 Collect spillage.

Storage:

P405 Store locked up.
P410 Protect from sunlight.
P411 + P235 Store at temperatures not exceeding < 20 °C/ < 68 °F. Keep cool.
P420 Store away from other materials.

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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
Chemical nature : Organic Peroxide
Liquid mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
tert-Butyl 2-ethylperoxyhexanoate	3006-82-4	>= 50 - < 55
di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide	6731-36-8	>= 25 - < 30
Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics)	64742-48-9	>= 25 - < 30

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Symptoms of poisoning may appear several hours later.
No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.
Call a physician immediately.

If inhaled : Call a physician or poison control center immediately.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathed in, move person into fresh air.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If on skin, rinse well with water.
If on clothes, remove clothes.
If symptoms persist, call a physician.

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- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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.
Call a physician immediately.
Contact a poison control center.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
May damage fertility.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : Treat symptomatically and supportively.
-

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.
- Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
The product will float on water and can be reignited on surface water.
Cool closed containers exposed to fire with water spray.
- Specific extinguishing methods : Do not use a solid water stream as it may scatter and spread fire.
Remove undamaged containers from fire area if it is safe to do so.
Use water spray to cool unopened containers.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must
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be disposed of in accordance with local regulations.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Follow safe handling advice and personal protective equipment recommendations.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Never return spills in original containers for re-use.
Treat recovered material as described in the section "Disposal considerations".

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 : Contact with incompatible substances can cause decomposition at or below SADT.
Clear spills immediately.
Suppress (knock down) gases/vapors/mists with a water spray jet.
To clean the floor and all objects contaminated by this material, use plenty of water.
Soak up with inert absorbent material.
Isolate waste and do not reuse.
Non-sparking tools should be used.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.
Use only explosion-proof equipment.
Keep away from combustible material.

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- Advice on safe handling : Do not swallow.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Avoid formation of aerosol.
Take precautionary measures against static discharges.
Never return any product to the container from which it was originally removed.
Provide sufficient air exchange and/or exhaust in work rooms.
Avoid confinement.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Smoking, eating and drinking should be prohibited in the application area.
Wash thoroughly after handling.
For personal protection see section 8.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Protect from contamination.
- Conditions for safe storage : Avoid impurities (e.g. rust, dust, ash), risk of decomposition.
Electrical installations / working materials must comply with the technological safety standards.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in original container.
Keep containers tightly closed in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
- Materials to avoid : Keep away from strong acids, bases, heavy metal salts and other reducing substances.
- Recommended storage temperature : < 20 °C

< 68 °F
- Further information on storage stability : No decomposition if stored normally.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12,	64742-48-9	TWA (Vapor)	171 ppm 1,200 mg/m ³ (total hydrocar-	Supplier data

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isoalkanes, <2% aromatics)			bons)	
		TWA	400 ppm 1,600 mg/m3	OSHA P0

Engineering measures : Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : ABEK-filter

Hand protection

Material : butyl-rubber
Break through time : 60 min
Glove thickness : 0.5 mm

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.4 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.
For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Hygiene measures : Keep away from food and drink.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Color : colorless

Odor : slight, musty

Odor Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available Decomposition

Flash point : 62 °C

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Density : 0.87 g/cm³ (25 °C)

Solubility(ies)
Water solubility : negligible

Self-Accelerating decomposition temperature (SADT) : 50 °C
Method: UN-Test H.4
SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Explosive properties : Not explosive

Oxidizing properties : No oxidising effect. Organic peroxide

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapors may form explosive mixture with air.

Conditions to avoid : Protect from contamination.
Contact with incompatible substances can cause

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decomposition at or below SADT.
Heat, flames and sparks.
Avoid confinement.

Incompatible materials : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

Hazardous decomposition products : Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Acute oral toxicity : LD50 (Rat): $\geq 10,000$ mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : LC50 (Rat): > 42.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 16,820 mg/kg
Method: OECD Test Guideline 402

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Acute oral toxicity : LD50 (Rat): $> 2,000$ mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): $> 2,000$ mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

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Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 8 h
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Method : OECD Test Guideline 404
Result : Mild skin irritation

Remarks : May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Vapors may cause irritation to the eyes, respiratory system and the skin.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

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di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Remarks : No data available
Remarks : Vapors may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Remarks : Causes sensitization.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitization by skin contact.

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Result : Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: positive

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Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

Genotoxicity in vivo : Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Remarks: No data available

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Not classified based on available information.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Remarks : This information is not available.

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Species : Mouse
Application Route : Oral
Result : negative

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

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.

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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

May damage fertility.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Oral
General Toxicity Parent: NOEL: 300 mg/kg body weight
Method: OECD Test Guideline 421

Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Oral
General Toxicity Parent: NOAEL: 300 mg/kg body weight
General Toxicity F1: NOAEL: 300 mg/kg body weight
Fertility: NOAEL Mating/Fertility: 100 mg/kg body weight
Early Embryonic Development: NOAEL F2: 300 mg/kg body weight
Method: OECD Test Guideline 443
GLP: yes

Effects on fetal development : Species: Rabbit
Application Route: Oral
General Toxicity Maternal: NOAEL: 30 mg/kg body weight
Developmental Toxicity: NOAEL: 100 mg/kg body weight
Method: OECD Test Guideline 414

Species: Rat
Application Route: Oral
General Toxicity Maternal: NOEL: 400 mg/kg body weight
Developmental Toxicity: NOEL: 400 mg/kg body weight
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Effects on fertility : Remarks: No data available

Effects on fetal development : Species: Rat
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight

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Method: OECD Test Guideline 414

STOT-single exposure

Not classified based on available information.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Remarks : No data available

STOT-repeated exposure

Not classified based on available information.

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Remarks : No data available

Repeated dose toxicity

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Species : Rat, male
NOAEL : 316 mg/kg
Exposure time : 28 d
Method : OECD Test Guideline 407

Species : Rat, female
NOAEL : 100 mg/kg
Exposure time : 28 d
Method : OECD Test Guideline 407

Species : Rat
NOAEL : 450 mg/kg
Method : OECD Test Guideline 408

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Solvents may degrease the skin.

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Components:

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

tert-Butyl 2-ethylperoxyhexanoate:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.66 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- NOEC (Poecilia reticulata (guppy)): 2.10 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.5 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.44 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- NOEC (Pseudokirchneriella subcapitata (green algae)): 0.018 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.45 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
- LOEC (Daphnia magna (Water flea)): 0.87 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
- Toxicity to microorganisms : EC50: 64 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

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Ecotoxicology Assessment

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

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 0.043 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (green algae)): 0.11 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0128 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: No toxicity at the limit of solubility.

Toxicity to microorganisms : EC50 (Bacteria): > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Toxicity to fish : LC0 (Oncorhynchus mykiss (rainbow trout)): 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC0 (Daphnia magna (Water flea)): 1,000 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC0 (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l
Exposure time: 72 h

NOELR (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l
Exposure time: 72 h

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): ≥ 1 mg/l
Exposure time: 21 d

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.
Remarks: Information given is based on data on the ingredients and the ecotoxicology of similar products.

Persistence and degradability

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Biodegradability : Result: Biodegradable
Method: OECD Test Guideline 301D

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Biodegradability : Result: Biodegradable
Method: OECD Test Guideline 301D

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Biodegradability : Result: rapidly biodegradable

Bioaccumulative potential

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Partition coefficient: n-octanol/water : log Pow: 4.79 (20 °C / 20 °C)

di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide:

Bioaccumulation : Bioconcentration factor (BCF): 443

Partition coefficient: n-octanol/water : log Pow: 6.53

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

Partition coefficient: n-octanol/water : Remarks: No data available

Mobility in soil

No data available

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Other adverse effects

Product:

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

Components:

Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics):

- Additional ecological information : 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.
Dispose of wastes in an approved waste disposal facility.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3113
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED
(1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE, tert-BUTYL PEROXY-2-ETHYLHEXANOATE)
Class : 5.2
Packing group : Not assigned by regulation

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Labels : 5.2

IATA-DGR

Not permitted for transport

IMDG-Code

UN number : UN 3113
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE, tert-BUTYL PEROXY-2-ETHYLHEXANOATE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-F, S-R
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 3113
Proper shipping name : Organic peroxide type C, liquid, temperature controlled (1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane, 25%, tert-Butyl peroxy-2-ethylhexanoate, 50%)
Class : 5.2
Packing group : Not assigned by regulation
Labels : ORGANIC PEROXIDE
ERG Code : 148
Marine pollutant : yes

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.

Additional advice

Temperature controlled transport.:
Control temperature : 20 °C
Emergency temperature : 25 °C

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

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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 : Flammable (gases, aerosols, liquids, or solids)
Organic peroxides
Respiratory or skin sensitization
Reproductive toxicity
Aspiration 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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

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

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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

This product does not contain any priority pollutants related to the U.S. Clean Water Act

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

International Regulations

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

TCSI (TW) : On the inventory, or in compliance with the inventory

TSCA (US) : All substances listed as active on the TSCA inventory

AIIIC (AU) : On the inventory, or in compliance with the inventory

DSL (CA) : All components of this product are on the Canadian DSL

KECI (KR) : On the inventory, or in compliance with the inventory

PICCS (PH) : On the inventory, or in compliance with the inventory

IECSC (CN) : On the inventory, or in compliance with the inventory

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TECI (TH) : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

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

SECTION 16. OTHER INFORMATION

Further information

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.
These safety instructions also apply to empty packaging which may still contain product residues.

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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Full text of other abbreviations

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA P0 / TWA : 8-hour time weighted average

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

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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; TECL - Thailand Existing Chemicals 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 a 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.

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