

# SAFETY DATA SHEET

## NOROX<sup>®</sup> 410



Version 5.1      Revision Date: 12/06/2022      SDS Number: 600000000049      Date of last issue: 10/25/2021  
Date of first issue: 05/08/2018

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### SECTION 1. IDENTIFICATION

Trade name : NOROX<sup>®</sup> 410  
Other means of identification : No data available  
CAS-No. : 3006-82-4

#### Manufacturer or supplier's details

Company name of supplier : United Initiators, Inc.

Address : 555 Garden Street  
Elyria OH 44035 USA  
  
United Initiators Canada Ltd.  
2147 PG Pulp Mill Road  
Prince George, BC-V2N 2S6 CANADA

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  
CANUTEC (24h): 1-613-996-6666

For Transportation Incidents : TERRAPURE EMERGENCY RESPONSE SERVICES (24h):  
1-800-567-7455

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

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 4  
Organic peroxides : Type C  
Skin sensitization : Category 1  
Reproductive toxicity : Category 1B

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Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 2

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H227 Combustible liquid.  
H242 Heating may cause a fire.  
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, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P234 Keep only in original packaging.  
P240 Ground and bond container and receiving equipment.  
P261 Avoid breathing mist or vapors.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it 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:

P403 Store in a well-ventilated place.

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P405 Store locked up.  
P410 Protect from sunlight.  
P411 Store at temperatures not exceeding < 10 °C/ < 50 °F.  
P420 Store separately.

### Disposal:

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

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance  
Chemical nature : Organic Peroxide liquid  
Substance name : tert-Butyl 2-ethylperoxyhexanoate  
CAS-No. : 3006-82-4  
Common Name/Synonym : No data available

### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
tert-Butyl 2-ethylperoxyhexanoate	tert-Butyl 2-ethylperoxyhexanoate	3006-82-4	<= 100 *

\* Actual concentration or concentration range 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.  
Call a physician immediately.

If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.  
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.

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- If on clothes, remove clothes.  
If symptoms persist, call a physician.
- 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.  
Call a physician immediately.
- Most important symptoms and effects, both acute and delayed : 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.
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### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray jet  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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.
- The product burns violently.  
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.
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Fire residues and contaminated fire extinguishing water must 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.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
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.

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### 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 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 : < 10 °C  
< 50 °F
- Further information on storage stability : No decomposition if stored normally.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**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.

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- Filter type : ABEK-filter
- Hand protection
- Material : butyl-rubber
  - Break through time : 480 min
  - Glove thickness : 0.5 mm
- Material : Nitrile rubber
- Break through time : 480 min
  - Glove thickness : 0.4 mm
- Remarks : The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove. 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.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : colorless
- Odor : ester-like

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Odor Threshold : No data available

pH : Not applicable

Melting point/freezing point : < -25 °C  
(1,013 hPa)

Boiling point/boiling range : Decomposition: Decomposes below the boiling point.

Flash point : 78 °C  
Method: ISO 3679

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : 0.02 hPa (20 °C)

Relative vapor density : No data available

Density : 0.9 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : 0.050 g/l insoluble (20 °C)

Self-Accelerating decomposition temperature (SADT) : 35 °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.

Viscosity  
Viscosity, dynamic : 3.7 mPa.s (20 °C)

Explosive properties : Risk of explosion by shock, friction, fire or other sources of ignition.

Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Organic peroxide

Refractive index : 1.428 (20 °C)



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### 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 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.

#### Product:

- Acute oral toxicity : LD<sub>0</sub> (Rat):  $\geq 10,000$  mg/kg  
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC<sub>50</sub> (Rat):  $> 42.2$  mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist
- Acute dermal toxicity : LD<sub>50</sub> (Rabbit): 16,818 mg/kg  
Method: OECD Test Guideline 402

#### Components:

##### **tert-Butyl 2-ethylperoxyhexanoate:**

- Acute oral toxicity : LD<sub>50</sub> (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 : LC<sub>50</sub> (Rat):  $> 42.2$  mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist
- Acute dermal toxicity : LD<sub>50</sub> (Rabbit): 16,820 mg/kg
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Method: OECD Test Guideline 402

### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

Remarks : May cause skin irritation in susceptible persons.

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

#### **Components:**

##### **tert-Butyl 2-ethylperoxyhexanoate:**

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

### **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.

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

#### **Components:**

##### **tert-Butyl 2-ethylperoxyhexanoate:**

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

### **Respiratory or skin sensitization**

#### **Skin sensitization**

May cause an allergic skin reaction.

#### **Respiratory sensitization**

Not classified based on available information.

#### **Product:**

Remarks : Causes sensitization.

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

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### **Components:**

#### **tert-Butyl 2-ethylperoxyhexanoate:**

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

#### **Germ cell mutagenicity**

Not classified based on available information.

### **Product:**

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

### **Components:**

#### **tert-Butyl 2-ethylperoxyhexanoate:**

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

#### **Carcinogenicity**

Not classified based on available information.

### **Product:**

Remarks : This information is not available.

### **Components:**

#### **tert-Butyl 2-ethylperoxyhexanoate:**

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Remarks : This information is not available.

### Reproductive toxicity

May damage fertility.

#### Product:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Oral  
General Toxicity Parent: NOAEL: 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: Rat  
Application Route: Oral  
Embryo-fetal toxicity.: NOAEL Mating/Fertility: 1,000 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.

#### 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

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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.

### STOT-single exposure

Not classified based on available information.

#### Product:

Remarks : No data available

#### Components:

##### tert-Butyl 2-ethylperoxyhexanoate:

Remarks : No data available

### STOT-repeated exposure

Not classified based on available information.

#### Product:

Remarks : No data available

#### Components:

##### tert-Butyl 2-ethylperoxyhexanoate:

Remarks : No data available

### Repeated dose toxicity

#### Product:

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

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Method : OECD Test Guideline 407  
Species : Rat  
NOAEL : 450 mg/kg  
Method : OECD Test Guideline 408

### **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**

Not classified based on available information.

### **Further information**

#### **Product:**

Remarks : No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### **Product:**

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

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Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.018 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

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

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

### 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 (Raphidocelis subcapitata (freshwater green alga)): 0.44 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.018 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

Method: OECD Test Guideline 201

GLP: yes

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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

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

### Persistence and degradability

#### Product:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 65 % (Theoretical oxygen demand)  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes  
Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

#### Components:

##### **tert-Butyl 2-ethylperoxyhexanoate:**

Biodegradability : Theoretical oxygen demand  
Result: Readily biodegradable.  
Biodegradation: 65 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes  
Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

### Bioaccumulative potential

#### Product:

Bioaccumulation : Bioconcentration factor (BCF): 202.4  
Method: QSAR



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### Components:

#### **tert-Butyl 2-ethylperoxyhexanoate:**

Bioaccumulation : Bioconcentration factor (BCF): 202.4  
Method: QSAR

#### **Mobility in soil**

No data available

#### **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.  
Toxic to aquatic life with long lasting effects.

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## 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.

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## SECTION 14. TRANSPORT INFORMATION

### **International Regulations**

#### **UNRTDG**

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

#### **IATA-DGR**

Not permitted for transport

#### **IMDG-Code**

UN number : UN 3113  
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE

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Class : 5.2  
Packing group : Not assigned by regulation  
Labels : 5.2  
EmS Code : F-F, S-R  
Marine pollutant : yes

CONTROLLED  
(tert-BUTYL PEROXY-2-ETHYLHEXANOATE)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable for product as supplied.

### Domestic regulation

#### TDG

UN number : UN 3113  
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (tert-BUTYL PEROXY-2-ETHYLHEXANOATE)  
Class : 5.2  
Packing group : II  
Labels : 5.2  
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

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## SECTION 15. REGULATORY INFORMATION

### International Regulations

Gefahrgruppe nach DGUV 13 Vorschrift 13 (bisher BGV B4): Ib, S+ (German regulatory requirements)  
Produkt unterliegt dem Sprengstoffgesetz (SprengG; Stoffgruppe C). (German regulatory requirements)

### 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  
ENCS (JP) : On the inventory, or in compliance with the inventory

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ISHL (JP) : On the inventory, or in compliance with the inventory

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

NZIoC (NZ) : On the inventory, or in compliance with the inventory

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

### Canadian lists

No substances are subject to a Significant New Activity Notification.

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## 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

AllC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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 Con-

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centration 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - 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; WHMIS - Workplace Hazardous Materials Information System

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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