

SAFETY DATA SHEET

TMCH-75-AL1



Version 2.0 Revision Date: 11/02/2020 SDS Number: 600000000070 Date of last issue: 04/24/2020
Date of first issue: 04/24/2020

SECTION 1. IDENTIFICATION

Trade name : TMCH-75-AL1

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 29 CFR 1910.1200

Flammable liquids : Category 3

Organic peroxides : Type C

Aspiration hazard : Category 1

Long-term (chronic) aquatic hazard : Category 4

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H242 Heating may cause a fire.

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H304 May be fatal if swallowed and enters airways.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements :

Prevention:

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.
P233 Keep container tightly closed.
P234 Keep only in original container.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage:

P405 Store locked up.
P410 Protect from sunlight.
P411 + P235 Store at temperatures not exceeding < 86 °F/ < 30 °C. Keep cool.
P420 Store away from other materials.

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) |
|----------------------|-----------|-----------------------|
| di-tert-butyl 3,3,5- | 6731-36-8 | >= 70 - < 75 |

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| | | |
|--|------------|---------------|
| trimethylcyclohexylidene diperoxide | | |
| Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics) | 64742-48-9 | >= 15 - < 20 |
| Naphtha (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics) | 64742-48-9 | >= 7.5 - < 10 |

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 : Wash contaminated clothing before re-use.
If on skin, rinse well with water.
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.
Do NOT induce vomiting.
Call a physician immediately.
Contact a poison control center.
- Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.
- 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 (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 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.
Evacuate personnel to safe areas.
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.
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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 : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).
Keep away from heat and sources of ignition.
Use only explosion-proof equipment.
Keep away from combustible material.

Advice on safe handling : Do not swallow.
Do not breathe vapors/dust.
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.
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.

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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 : < 86 °F

< 30 °C

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 |
|--|------------|-------------------------------|--|---------------|
| Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics) | 64742-48-9 | TWA (Vapor) | 171 ppm 1,200 mg/m ³ (total hydrocarbons) | Supplier data |
| Naphta (Petroleum), hydrotreated heavy (Hydrocarbons, C11-C12, isoalkanes, <2% aromatics) | 64742-48-9 | TWA (Vapor) | 171 ppm 1,200 mg/m ³ (total hydrocarbons) | Supplier data |

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 : 480 min
Glove thickness : 0.5 mm

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.

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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

Color : colorless

Odor : characteristic

pH : not determined

Melting point/range : < -25 °C

Boiling point/boiling range : not determined Decomposition

Flash point : 57 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Self-ignition : The substance or mixture is not classified as self heating. The substance or mixture is not classified as pyrophoric.

Upper explosion limit / Upper flammability limit : not determined

Lower explosion limit / Lower flammability limit : not determined

Vapor pressure : not determined

Relative vapor density : No data available

Density : 0.87 g/cm³ (20 °C)

Solubility(ies)
Water solubility : practically insoluble

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

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Self-Accelerating decomposition temperature (SADT) : 60 °C
SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Viscosity
Viscosity, dynamic : 8 mPa.s (20 °C)

Viscosity, kinematic : No data available

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

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

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

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

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

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

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

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

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

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.

Components:

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

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

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Species : Rabbit
Assessment : Repeated exposure may cause skin dryness or cracking.
Method : OECD Test Guideline 404
Result : No skin irritation

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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.

Components:

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-C13, isoalkanes, <2% aromatics):

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

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

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-C13, isoalkanes, <2% aromatics):

Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.

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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:

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

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Species: Rat
Application Route: inhalation (vapor)
Exposure time: 4 w
Method: OPPTS 870.5395
Result: negative

Species: Rat
Application Route: Intraperitoneal
Method: OECD Test Guideline 475
Result: negative

Species: Rat
Application Route: Oral
Method: OECD Test Guideline 486
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

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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:

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

Species : Mouse
Application Route : Oral
Result : negative

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Species : Mouse
Application Route : Skin contact
Exposure time : 102 weeks
Method : OECD Test Guideline 451
Result : negative

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

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.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

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
Method: OECD Test Guideline 414

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Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Effects on fertility : Species: Rat
Application Route: inhalation (vapor)
General Toxicity Parent: NOAEL: >= 20 mg/l
Fertility: NOAEC Mating/Fertility: >= 20 mg/l
Method: OECD Test Guideline 416

Effects on fetal development : Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 414
Result: negative

Reproductive toxicity - Assessment : Fertility classification not possible from current data.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Species : Rat
: < 500 mg/kg
Application Route : Ingestion
Exposure time : 28 d

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

May be fatal if swallowed and enters airways.

Naphtha (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:

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.

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

Toxicity to fish : LC0 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Information given is based on data obtained from similar substances.

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

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Method: OECD Test Guideline 202
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae/aquatic plants : EC0 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

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

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:

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

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

Naphtha (petroleum), hydrotreated heavy (Hydrocarbons, C11-C13, isoalkanes, <2% aromatics):

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

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

Biodegradability : Result: rapidly biodegradable

Bioaccumulative potential

Components:

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

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.
May cause long lasting harmful effects to aquatic life.

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

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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 3103
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID
(1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

IATA-DGR

UN/ID No. : UN 3103
Proper shipping name : Organic peroxide type C, liquid
(1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Division 5.2 - Organic peroxides, Handling Label - Keep Away From Heat
Packing instruction (cargo aircraft) : 570
Packing instruction (passenger aircraft) : 570

IMDG-Code

UN number : UN 3103
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID
(1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-J, S-R
Marine pollutant : no

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 3103

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Date of first issue: 04/24/2020

Proper shipping name : Organic peroxide type C, liquid
(1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane, 75%)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Division 5.2 - Organic peroxides
ERG Code : 146
Marine pollutant : no

Special precautions for user

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

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

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.

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
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 SOCM/ 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

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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.

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 |
| AICS (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 |

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/ |
|--|---|---|

| | | |
|---------------|---|------------|
| Revision Date | : | 11/02/2020 |
|---------------|---|------------|

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with

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x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Material 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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