

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

SECTION 1. IDENTIFICATION

Trade name : TBPA-50-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

Acute toxicity (Inhalation) : Category 3

Eye irritation : Category 2A

Skin sensitization : Category 1

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019



Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H242 Heating may cause a fire.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H411 Toxic to aquatic life with long lasting effects.

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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
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.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410 Protect from sunlight.

P411 + P235 Store at temperatures not exceeding 104 °F/ 40 °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) |
|---|--------------------------|-----------------------|
| tert-butyl peracetate | 107-71-1 | >= 45 - < 50 |
| Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9) | 64742-48-9 68551-19-9 | >= 45 - < 50 |

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.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

- Call a physician immediately.
If breathed in, move person into fresh air.
Contact a poison control center.
- 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.
- 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.
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.
Causes serious eye irritation.
Toxic if inhaled.
- 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.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

- 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.
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.

SAFETY DATA SHEET

TBPA-50-AL1



| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 04/03/2019 |
| 2.0 | 03/27/2020 | 600000000061 | Date of first issue: 04/03/2019 |

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 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 : 14 - 104 °F
-10 - 40 °C
- Further information on storage stability : No decomposition if stored normally.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|------------|-------------------------------|--|----------|
| Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9) | 64742-48-9 | TWA | 500 ppm 2,000 mg/m ³ | OSHA Z-1 |
| | | TWA | 400 ppm 1,600 mg/m ³ | 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 : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.4 mm

Material : butyl-rubber
Break through time : 10 min
Glove thickness : 0.5 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 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.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Hygiene measures : Avoid contact with skin, eyes and clothing.
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 : pungent

pH : No data available

Melting point/range : < -20 °C

Boiling point/boiling range : Not applicable Decomposition

Flash point : 33 °C
Method: closed cup

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 : 6.2 %(V)
Solvent

Lower explosion limit / Lower flammability limit : 0.9 %(V)

Vapor pressure : 0.02 hPa (25 °C)

Relative vapor density : No data available

Density : ca. 0.84 g/cm³ (20 °C)

Solubility(ies)
Water solubility : negligible

Partition coefficient: n-octanol/water : log Pow: 1.6 (25 °C)

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Self-Accelerating decomposition temperature (SADT) : 70 °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 : 1 mPa.s (20 °C)

Explosive properties : Not explosive

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

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

Toxic if inhaled.

Product:

Acute oral toxicity : LD50 (Rat, male): 3,195 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male): 9.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Acute dermal toxicity : LD50 (Rabbit, male): 6,000 mg/kg
Method: OECD Test Guideline 402

Components:

tert-butyl peracetate:

Acute oral toxicity : LD50 (Rat, male): 1,597 mg/kg
Method: OECD Test Guideline 401
Remarks: The value is calculated

Acute inhalation toxicity : LC50 (Rat, male and female): 4.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Remarks: Calculation

Acute dermal toxicity : LD50 (Rabbit, male): 3,000 mg/kg
Method: OECD Test Guideline 402
Remarks: The value is calculated

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5000 ppm
Exposure time: 8 h
Test atmosphere: vapor
Remarks: Insufficient Data to Classify
Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : No skin irritation

Remarks : May cause skin irritation in susceptible persons.

Components:

tert-butyl peracetate:

Species : Rabbit
Result : No skin irritation

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Assessment : Repeated exposure may cause skin dryness or cracking.
Result : Repeated exposure may cause skin dryness or cracking.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit
Result : Eye irritation

Remarks : May cause irreversible eye damage.

Components:

tert-butyl peracetate:

Result : Eye irritation

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Remarks : No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Test Type : Maximization Test
Result : May cause sensitization by skin contact.

Remarks : Causes sensitization.

Components:

tert-butyl peracetate:

Test Type : Maximization Test
Result : May cause sensitization by skin contact.

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Remarks : Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro : Test Type: Ames test
Result: mutagenic

Test Type: In vitro mammalian cell gene mutation test
Result: negative

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

Components:

tert-butyl peracetate:

Genotoxicity in vitro : Test Type: Ames test
Result: mutagenic

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Germ cell mutagenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Not classified based on available information.

Components:

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

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:

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Effects on fetal development : Species: Rat

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Application Route: Oral
Teratogenicity: NOAEL: 1,000
Method: OECD Test Guideline 414
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

tert-butyl peracetate:

Species : Rat, male and female
NOAEL : 50 mg/kg
Application Route : oral (gavage)
Method : OECD Test Guideline 422
Remarks : The value is calculated

Species : Rat, male and female
NOAEL : 280 mg/kg
Application Route : Inhalation
Test atmosphere : vapor
Exposure time : 28
Method : OECD Test Guideline 412
Remarks : The value is calculated

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Species : Rat
NOAEL : 1000 mg/kg
Application Route : Oral
Exposure time : 4 wk
Remarks : Based on data from similar materials

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

May be fatal if swallowed and enters airways.

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

Experience with human exposure

Components:

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Skin contact : Remarks: Prolonged skin contact may defat the skin and produce dermatitis.

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

tert-butyl peracetate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 39.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.31 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 6.4 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 2.6 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: 407.1 mg/l
Test Type: Respiration inhibition of activated sludge
Method: OECD Test Guideline 209

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): 316 mg/l
Exposure time: 28 d

Persistence and degradability

Components:

tert-butyl peracetate:

Biodegradability : Result: not rapidly degradable
Method: Closed Bottle test

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Bioconcentration factor (BCF): 5.28

Components:

tert-butyl peracetate:

Bioaccumulation : Bioconcentration factor (BCF): 5.28

Partition coefficient: n-octanol/water : log Pow: 1.6 (25 °C / 25 °C)

Contains one or both isoparaffinic hydrocarbons (Naphtha hydrotreated heavy CAS 64742-48-9, Alkanes, C10-13-iso CAS 68551-19-9):

Partition coefficient: n-octanol/water : Pow: > 4

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).

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

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

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 3103
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID
(tert-BUTYL PEROXYACETATE)
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
(tert-Butyl peroxyacetate)
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
(tert-BUTYL PEROXYACETATE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

EmS Code : F-J, 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 3103
Proper shipping name : Organic peroxide type C, liquid
(tert-Butyl peroxyacetate, 50%)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Division 5.2 - Organic peroxides
ERG Code : 146
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.

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
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Respiratory or skin sensitization
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).

SAFETY DATA SHEET

TBPA-50-AL1



Version 2.0 Revision Date: 03/27/2020 SDS Number: 600000000061 Date of last issue: 04/03/2019
Date of first issue: 04/03/2019

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

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

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:

| | |
|------------|--|
| 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 |
| ENCS (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 |

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/>

SAFETY DATA SHEET

TBPA-50-AL1



| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 04/03/2019 |
| 2.0 | 03/27/2020 | 600000000061 | Date of first issue: 04/03/2019 |

Revision Date : 03/27/2020

Full text of other abbreviations

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

OSHA P0 / TWA : 8-hour time weighted average

OSHA Z-1 / TWA : 8-hour time weighted average

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 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.

SAFETY DATA SHEET

TBPA-50-AL1



| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 04/03/2019 |
| 2.0 | 03/27/2020 | 600000000061 | Date of first issue: 04/03/2019 |

US / Z8