SECTION 1. IDENTIFICATION

Product name : TBPEH

Manufacturer or supplier’s details
Company name of supplier : United Initiators, Inc.
Address : 555 Garden Street
           Elyria OH 44035
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 4
Organic peroxides : Type C
Skin sensitization : Category 1
Reproductive toxicity : Category 1B
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1

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.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

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

**Response:**
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P391 Collect spillage.

**Storage:**
P405 Store locked up.
P410 Protect from sunlight.
P411 + P235 Store at temperatures not exceeding < 10 °C/ < 50 °F. 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**

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical nature</td>
<td>Organic Peroxide liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>tert-Butyl 2-ethylperoxyhexanoate</td>
</tr>
</tbody>
</table>
CAS-No. : 3006-82-4

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Butyl 2-ethylperoxyhexanoate</td>
<td>3006-82-4</td>
<td>&lt;= 100</td>
</tr>
</tbody>
</table>

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. 
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.

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.

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

Environmental precautions:
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

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

SECTION 7. HANDLING AND STORAGE

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

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

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.

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.

Filter type: ABEK-filter

Hand protection

Material: butyl-rubber

Break through time: >= 480 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.

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.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : liquid

**Color** : colorless

**Odor** : ester-like

**Odor Threshold** : No data available

**pH** : No data available

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

**Initial boiling point and 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/cm³ (20 °C)

**Solubility(ies)**  
**Water solubility** : ca. 0.05 g/l insoluble (20 °C)

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

**Self-Accelerating decomposition temperature (SADT)** : 40 °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)

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 : LD0 (Rat): >= 10,000 mg/kg
Method: OECD Test Guideline 401

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

Acute dermal toxicity : LD50 (Rabbit): 16,818 mg/kg
Method: OECD Test Guideline 402

Components:

tert-Butyl 2-ethylperoxyhexanoate:
Acute oral toxicity : LD0 (Rat): >= 10,000 mg/kg
Method: OECD Test Guideline 401
Acute inhalation toxicity: LC50 (Rat): > 42.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity: LD50 (Rabbit): 16,818 mg/kg
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:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Remarks: Vapors may cause irritation to the eyes, respiratory system and the skin.

Components:
tert-Butyl 2-ethylperoxyhexanoate:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

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.

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:**

**Remarks:** This information is not available.

**IARC**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

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

**Reproductive toxicity**
May damage fertility.

**Product:**

<table>
<thead>
<tr>
<th>Effects on fertility</th>
<th>Test Type: Reproduction/Developmental toxicity screening test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Oral</td>
</tr>
<tr>
<td></td>
<td>General Toxicity Parent: NOAEL: 300 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 421</td>
</tr>
</tbody>
</table>

| 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  |

<table>
<thead>
<tr>
<th>Effects on fetal development</th>
<th>Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route: Oral</td>
<td></td>
</tr>
<tr>
<td>Embryo-fetal toxicity.: NOAEL Mating/Fertility: 1,000 mg/kg body weight</td>
<td></td>
</tr>
<tr>
<td>Method: OECD Test Guideline 414</td>
<td></td>
</tr>
</tbody>
</table>

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

Components:

**tert-Butyl 2-ethylperoxyhexanoate:**

<table>
<thead>
<tr>
<th>Effects on fertility</th>
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</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 421</td>
</tr>
</tbody>
</table>
### Test Type: One-generation reproduction toxicity study
- **Species:** Rat
- **Application Route:** Oral
- **General Toxicity Parent:** 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.

### 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
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SAFETY DATA SHEET

TBPEH

Version: 3.0
Revision Date: 09/18/2019
SDS Number: 600000000001
Date of last issue: 06/04/2019
Date of first issue: 09/13/2017

NOAEL: 100 mg/kg
Exposure time: 28 d
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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

tert-Butyl 2-ethylperoxyhexanoate:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 8.66 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

NOEC (Poecilia reticulata (guppy)): 2.10 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 7.5 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): 0.44
mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.018 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 1

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

NOEC (Daphnia magna (Water flea)): 0.45 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

LOEC (Daphnia magna (Water flea)): 0.87 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity): 1

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: Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:
tert-Butyl 2-ethylperoxyhexanoate:
Biodegradability: Result: Biodegradable
Method: OECD Test Guideline 301D

Bioaccumulative potential

Components:

tert-Butyl 2-ethylperoxyhexanoate:
Partition coefficient: n-octanol/water: log Pow: 4.79 (20 °C / 20 °C)

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.
Very 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 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 CONTROLLED
(tert-BUTYL PEROXY-2-ETHYLHEXANOATE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-F, S-R
Marine pollutant : yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
UN/ID/NA number : UN 3113
Proper shipping name : Organic peroxide type C, liquid, temperature controlled
                       (tert-Butyl peroxy-2-ethylhexanoate, >52-100%)
Class : 5.2
Packing group : Not assigned by regulation
Labels : ORGANIC PEROXIDE
ERG Code : 148
Marine pollutant : yes

Special precautions for user

Additional advice:
Temperature controlled transport:
Control temperature : 20 °C
Emergency temperature : 25 °C

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
                       Respiratory or skin sensitization
                       Reproductive toxicity

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 SOCMI 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. Clean Water Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

**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:**

- **DSL (CA)**: All components of this product are on the Canadian DSL
- **AICS (AU)**: On the inventory, or in compliance with the inventory
- **NZIoC (NZ)**: On the inventory, or in compliance with the inventory
- **ENCS (JP)**: On the inventory, or in compliance with the inventory
- **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
- **TCSI (TW)**: On the inventory, or in compliance with the inventory
- **TSCA (US)**: On TSCA 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**

**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 Haz-
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:

Revision Date: 09/18/2019