2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:
WHMIS 2015:

Acute Toxicity - Oral [Category 4]
Skin Corrosion/Irritation [Category 2]
Eye Damage/Irritation [Category 2A]
Sensitization - Skin [Category 1]
Specific Target Organ Toxicity (Single Exposure) [Category 1]
Specific Target Organ Toxicity (Repeated Exposure) [Category 2]
Aquatic Hazard (Acute) [Category 1]
Aquatic Hazard (Long-Term) [Category 1]

Signal word: Danger!

Hazard Statement(s):
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects
Causes damage to: Nervous System
May cause damage to organs through prolonged or repeated exposure: Liver Thyroid Gland Lung

Pictogram(s) or Symbol(s):

Precautionary Statement(s):

[Prevention]
Do not breathe dust, fume, mist, vapors or spray. Avoid release to the environment. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wash hands and face thoroughly after handling. Wear protective gloves, eye protection.
If swallowed: Call a poison center or doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. If exposed: Call a poison center or doctor. Collect spillage.

[Response]

[Storage]
Store locked up.

[Disposal]
Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.).

Hazards not otherwise classified:

[HNOC]
May be harmful if in contact with skin.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance/mixture:</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components:</td>
<td>2,6-Di-tert-butyl-p-cresol</td>
</tr>
<tr>
<td>Percent:</td>
<td>&gt;99.0%(GC)</td>
</tr>
<tr>
<td>CAS RN:</td>
<td>128-37-0</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>220.36</td>
</tr>
<tr>
<td>Chemical Formula:</td>
<td>C₁₅H₂₄O</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>2,6-Di-tert-butyl-4-methylphenol, 3,5-Di-tert-butyl-4-hydroxytoluene, BHT, Butylhydroxytoluene</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.

Ingestion: Call a POISON CENTER or doctor/physician. Rinse mouth.

Symptoms/effects:

Acute: Redness.

Delayed: May cause skin sensitization.

Indication of any immediate medical attention: Not available.

Notes to physician: No data available

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

Hazardous combustion products: These products include: Carbon oxides

Other specific hazards: Closed containers may explode from heat of a fire.

Advice for firefighters: Wear self-contained breathing apparatus if possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned. Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

Methods and materials for containment and cleaning up:

7. HANDLING AND STORAGE

Precautions for safe handling: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool and dark place. Store locked up. Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:
ACGIH TLV(TWA): 2 mg/m³ (IFV)

Appropriate engineering controls: Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment
Respiratory protection: Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
Hand protection: Impervious gloves.
Eye protection: Safety goggles. A face-shield, if the situation requires.
Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Solid
Form: Crystal - Powder
Colour: White
Odour: Slight Phenolic
Odour threshold: No data available

Melting point/freezing point: 71°C (160°F)
Boiling point/range: 265°C (509°F)
Decomposition temperature: No data available
Relative density: No data available
Kinematic viscosity: No data available
Log Pow: No data available
pH: No data available
Vapour pressure: No data available
Vapour density: 7.6
Dynamic Viscosity: No data available
Evaporation rate(Butyl Acetate=1): No data available
Flash point: No data available
Flammability(solid, gas): No data available
Autoignition temperature: 359°C (678°F)
Flammability or explosive limits: Lower: 15%, Upper: No data available

Solubility(ies):
[Water] Insoluble (0.06mg/100mL, 25°C)
[Other solvents] Many organic solvents
Soluble: Glycerol , Propylene glycol
Insoluble:

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical stability: Stable under proper conditions.
Possibility of hazardous reactions: No special reactivity has been reported.
Incompatible materials: Oxidizing agents, Strong bases
Hazardous decomposition products: Carbon dioxide, Carbon monoxide
11. TOXICOLOGICAL INFORMATION

RTECS Number: GO7875000

**Acute Toxicity:**
- orl-rat LD50: 890 mg/kg
- ivn-mus LD50: 180 mg/kg

**Skin corrosion/irritation:**
- skn-rbt 500 mg/48H MOD
- skn-hmn 500 mg/48H MLD

**Serious eye damage/irritation:**
- eye-rbt 100 mg/24H MOD

**Respiratory or skin sensitization:**
- No data available

**Germ cell mutagenicity:**
- dni-hmn-hla 500 umol/L
- dns-rat-lvr 100 pmol/L

**Carcinogenicity:**
- orl-mus TDLo: 1200 mg/kg/3W-I
- orl-rat TDLo: 134 g/kg/32W-C

**Ecotoxicity:**
- Fish: 48h LC50: 5.0 ppm (Oryzias latipes)
- 96h LC50: 1.1 mg/L (Oryzias latipes)
- Crustacea: 48h EC50: 0.84 mg/L (Daphnia magna)
- Algae: 72h EC50: >0.24 mg/L (Selenastrum capricornutum)

**Persistence / degradability:**
- 4.5% (by BOD), 0.8% (by GC)

**Bioaccumulative potential (BCF):**
- 220 - 2800 (conc. 500 ppb), 230 - 2500 (conc. 50 ppb), 330 - 1800 (conc. 5 ppb)

**Mobility in soil**
- Log Pow: 5.1
- Soil adsorption (Koc): No data available
- Henry’s Law (PaM^3/mol): No data available

**Reproductive toxicity:**
- orl-mus TDLo: 1200 mg/kg (9D preg)
- orl-rat TDLo: 35 g/kg (10W male)

**Target organ(s):**
- Causes damage to: Nervous System
- May cause damage to organs through prolonged or repeated exposure: Liver Thyroid Gland Lung

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

**Disposal of product:**
Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

**Disposal of container:**
Dispose of as unused product. Do not re-use empty containers.

**Other considerations:**
Observe all federal, state and local regulations when disposing of the substance.
14. TRANSPORT INFORMATION

DOT (US)
UN number: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
Class or Division: 9 Miscellaneous hazardous material
Packing Group: III

IATA
UN number: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
Class or Division: 9 Miscellaneous hazardous material
Packing Group: III

IMDG
UN number: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
Class or Division: 9 Miscellaneous hazardous material
Packing Group: III

EmS number: F-A, S-F

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):
This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations
CERCLA Hazardous substance and Reportable Quantity:
SARA 313: Not Listed
SARA 302: Not Listed

State Regulations
State Right-to-Know
Massachusetts Listed
New Jersey Listed
Pennsylvania Listed
California Proposition 65: Not Listed

Other Information
NFPA Rating:
Health: 2
Flammability: 1
Instability: 0

HMIS Classification:
Health: 2
Flammability: 1
Physical: 0

International Inventories
Canada: DSL On DSL
EC-No: 204-881-4

16. OTHER INFORMATION

Revision date: 07/06/2018
Revision number: 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.