1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: BUTYLATED HYDROXY TOLUENE

Other name(s): BHT; 2,6-Di-tert-butyl-p-cresol; 2,6-Di-tertiary butyl-4-methyl phenol; Topanol O; Ionol CP; AABUT90001

Recommended Use of the Chemical Industrial additive.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002 Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the “Other Information” section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings: that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Acute Oral Toxicity - Category 4
Eye Irritation - Category 2A
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
Skin corrosion/irritation - Category 3

SIGNAL WORD: WARNING

Hazard Statement(s):
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.
Precautionary Statement(s):

Prevention:
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P273 Avoid release to the environment.

Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P391 Collect spillage.

Storage:
No storage statements.

Disposal:
P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Hazard Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-diterbutylhydroxytoluene</td>
<td>128-37-0</td>
<td>&gt;=99.9%</td>
<td>H316 H319 H410</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Seek medical advice if effects persist.

Skin Contact:
If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

Eye Contact:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:
Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).
Safety Data Sheet

Unsuitable Extinguishing Media:  
Water jet.

Hazchem or Emergency Action Code:  2Z

Specific hazards arising from the chemical:  
Combustible solid. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:  
On burning will emit toxic fumes, including those of oxides of carbon. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:  
Shut off all possible sources of ignition. Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:  
Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. DO NOT spray with water.

7. HANDLING AND STORAGE

Precautions for safe handling:  
Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet “Dust Explosion Hazards”. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities:  
Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store below 50°C. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

2,6-Di-tert-butyl-p-cresol:  8hr TWA = 10 mg/m³

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Appropriate engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.

Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C15 H24 O</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.048 @20°C</td>
</tr>
<tr>
<td>Relative Vapour Density (air=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Pressure (20 °C)</td>
<td>3.82 Pa @24.85°C</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>127</td>
</tr>
<tr>
<td>Flammability Limits (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water (g/L)</td>
<td>0.0006 @25°C</td>
</tr>
<tr>
<td>Melting Point/Range (°C)</td>
<td>70</td>
</tr>
<tr>
<td>Boiling Point/Range (°C)</td>
<td>265</td>
</tr>
<tr>
<td>Decomposition Point (°C)</td>
<td>&gt;100</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>3.47 cSt @80°C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: No information available.
Chemical stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions: Dust explosion hazard. May decompose upon contact with strong acids, extremely high or low temperatures, direct sunlight.

Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame. Avoid dust generation.

Incompatible materials: Incompatible with acid anhydrides, acid chlorides, strong bases, copper, copper alloys, steel, oxidising agents, alkalis, strong acids.

Hazardous decomposition products: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain.

Eye contact: An eye irritant.

Skin contact: Contact with skin will result in mild irritation.

Inhalation: Breathing in dust may result in respiratory irritation.

Acute toxicity:
Oral LD50 (rat): 890 mg/kg.

Skin corrosion/irritation: Mild irritant (human).
Serious eye damage/irritation: Moderate irritant (rabbit).
Respiratory or skin sensitisation: No information available.

Chronic effects: Butylated hydroxy toluene has been classified by the International Agency for Research on Cancer (IARC) as a Group 3 agent. The agent is not classifiable as to its carcinogenicity to humans. No evidence of mutagenic properties.

Aspiration hazard: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Persistence/degradability: Not readily biodegradable.

Bioaccumulative potential: Does not bioaccumulate.

Mobility in soil: No information available.

Aquatic toxicity: Very toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.

48hr EC50 (Daphnia magna): 0.48 mg/L
96hr LC50 (fish): 0.199 mg/L

13. DISPOSAL CONSIDERATIONS

Product Name: BUTYLATED HYDROXY TOLUENE
Substance No: 000030130504
Issued: 21/06/2018
Version: 5
Disposal methods:
Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Normally suitable for incineration by an approved agent.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings: that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

UN No: 3077
Transport Hazard Class: 9 Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BUTYLATED HYDROXY TOLUENE)

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 3077
Transport Hazard Class: 9 Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BUTYLATED HYDROXY TOLUENE)

IMDG EMS Fire: F-A
IMDG EMS Spill: S-F

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 3077
Transport Hazard Class: 9 Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BUTYLATED HYDROXY TOLUENE)

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.
Classification of the chemical:
Acute Oral Toxicity - Category 4
Eye Irritation - Category 2A
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
Skin corrosion/irritation - Category 3

Hazard Statement(s):
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Poisons Schedule (SUSMP): None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION


This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:
5 Yearly Revised Primary SDS

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.