**IDENTIFICATION**

**Country of origin**  
Malaysia

**Supplier**  
Jamorin International Limited  
35 Berkely Square, Mayfair, London, W1J 5BF, UK

**Trade name**  
Purified Terephthalic Acid (PTA)

**Chemical name**  
Purified Terephthalic Acid

**Synonyms**  
Purified Terephthalic Acid

**Use of the substance / preparation**  
Used in polyester manufacturing.

**HAZARDS IDENTIFICATION**

**Classification of the substance/preparation**  
Hazard class and category code.

<table>
<thead>
<tr>
<th>Study/hazard statement</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Category 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Oral LD50</td>
<td>≤ 5 mg/kg</td>
<td>&gt; 5 mg/kg</td>
<td>&gt; 50 mg/kg</td>
<td>&gt; 300 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
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<tr>
<td></td>
<td>Fatal if swallowed</td>
<td>Fatal if swallowed</td>
<td>Toxic if swallowed</td>
<td>Harmful if swallowed</td>
<td>May be harmful if swallowed</td>
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<tr>
<td>Acute Dermal LD50</td>
<td>≤ 50 mg/kg</td>
<td>&gt; 50 mg/kg</td>
<td>&gt; 200 mg/kg</td>
<td>&gt; 1000 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
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<tr>
<td></td>
<td>Fatal in contact with skin</td>
<td>Fatal in contact with skin</td>
<td>Toxic in contact with skin</td>
<td>Harmful in contact with skin</td>
<td>May be harmful in contact with skin</td>
</tr>
<tr>
<td>Acute Inhalation</td>
<td>Dust LC50</td>
<td>Gases LC50</td>
<td>Vapours LC50</td>
<td>Flammable liquids</td>
<td></td>
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<tr>
<td></td>
<td>&lt; 0.05 mg/L</td>
<td>&lt; 100 ppm/V</td>
<td>&lt; 0.5 mg/L</td>
<td>Flash point &lt; 23 °C</td>
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<td>and initial boiling</td>
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<td>point ≤ 35 °C.</td>
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<td>Extremely</td>
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<td>flammable liquid</td>
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<td>and vapour</td>
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<td>Flash point</td>
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<td>≤ 23 °C</td>
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<td>and initial boiling</td>
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<td>point &gt; 35 °C.</td>
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<td>Highly flammable</td>
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<td>liquid and vapour</td>
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<td>Flash point</td>
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<td>≥ 23 °C ≤ 60 °C.</td>
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<td>Flammable liquid</td>
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<td>and vapour</td>
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<td>Flash point</td>
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<td>&gt; 60 °C ≤ 93 °C.</td>
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<td>Combustible</td>
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<td>liquid</td>
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<td></td>
<td>Not Applicable</td>
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</tbody>
</table>

**Study/hazard statement**  
Health  
Environmental  
Physical

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<th>Physical</th>
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<td>Dust hazardous for health if inhaled</td>
<td>Aquatic Toxicity –Category- NA</td>
<td>Flammable – Category NA</td>
</tr>
</tbody>
</table>

**GHS Category table for reference**

- **Health**  
- **Environmental**  
- **Physical**

**NOTE:** Gases concentration are expressed in parts per million per volume (ppmV).

**NOTE 1:** Category 5 is for mixtures which are of relatively low acute toxicity but which under certain circumstances may pose a hazard to vulnerable populations. These mixtures are anticipated to have an oral or dermal LD50 value in the range of 2000-5000 mg/kg bodyweight or equivalent dose for other routes of exposure. In light of animal welfare considerations, testing in animals in Category 5 ranges is discouraged and should only be considered when there is a strong likelihood that results of such testing would have a direct relevance for protecting human health.

**NOTE 2:** These values are designed to be used in the calculation of the ATE for classification of a mixture based on its ingredients and do not represent test results. The values are conservatively set at the lower end of the range of Categories 1 and 2 and at a point approximately 1/10th from the lower end of the range for Categories 3-5.
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| Eye Irritation         | Effects on the cornea, iris or conjunctiva that are not expected to reverse or that have not fully reversed within 21 days. Causes severe eye damage. | 2A: Effects on the cornea, iris or conjunctiva that fully reverse within 21 days. Causes severe eye irritation.  
2B: Effects on the cornea, iris or conjunctiva that fully reverse within 7 days. Causes eye irritation. | Not applicable                         |
| Skin Irritation        | Destruction of skin tissue, with sub categorization based on exposure of up to 3 minutes (A), 1 hour (B), or 4 hours (C). Causes severe skin burns and eye damage. | Mean value of ≥ 2.3 > 4.0 for erythema/eschar or edema in at least 2 of 3 tested animals from gradings at 24, 48, and 72 hours (or on 3 consecutive days after onset if reactions are delayed); inflammation that persists to end of the (normally 14-day) observation period. Causes skin irritation. | Mean value of ≥ 1.5 < 2.3 for erythema/eschar or edema in at least 2 of 3 tested animals from gradings at 24, 48, and 72 hours (or on 3 consecutive days after onset if reactions are delayed). Causes mild skin irritation. |
| Environment: Acute Toxicity Category | 96 hours LC50 (fish) < 1mg/L  
48 hours EC50 (crustacea) < 1 mg/L  
72/96 hours ErC50 (aquatic plants) < 1 mg/L  
Very toxic to aquatic life | 96 hours LC50 (fish) > 1 ≤ 10 mg/L  
48 hours EC50 (crustacea) > 1 ≤ 10 mg/L  
72/96 hours ErC50 (aquatic plants) > 1 ≤ 10 mg/L  
Toxic to aquatic life | 96 hours LC50 (fish) >10 ≤ 100 mg/L  
48 hours EC50 (crustacea) > 10 ≤ 100 mg/L  
72/96 hours ErC50 (aquatic plants) > 10 ≤ 100 mg/L  
Harmful to aquatic life |
| Flammable Aerosol      | Extremely flammable aerosol                                                  | Flammable aerosol                                                                                                                                                                                   | Not Applicable                         |
| Flammable solids       | Using the burning rate test, substances or mixtures other than metal powders:  
(a) wetted zone does not stop fire and  
(b) burning time < 45 s or burning rate > 2.2 mm/s. Using the burning rate test, metal powders that have burning time ≤ 5 minutes  
Flammable solid | Using the burning rate test, substances or mixtures other than metal powders:  
(a) wetted zone does not stop fire for at least 4 minutes and  
(b) burning time < 45 s or burning rate > 2.2 mm/s. Using the burning rate test, metal powders that have burning time > 5 ≤ 10 minutes  
Flammable solid | Not Applicable                         |
| Flammable gases        | Gases, which at 20 °C and standard pressure of 101.3 kPA:  
(a) are ignitable when in a mixture of 13% or less by volume in air; or  
(b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.  
Extremely flammable gas | Gases, other than those of category 1, which, at 20 °C and a standard pressure of 101.3 kPA, have a flammable range while mixed in air.  
Flammable gas | Not Applicable                         |
GHS Label
GHS07 Warning.

Details of above statements:

Hazard Statements
Dust harmful for health if inhaled. Dust explosion may take place-Static charge generation possible

Precautionary Statement Prevention
Take precautionary measures against static discharges

Precautionary Statement Response
Take precautionary measures against static discharges

Precautionary Statement Storage
Take precautionary measures against static discharges

Precautionary Statement Disposal
No Statement

Information pertaining to particular dangers for human
Dust is irritating to eyes, skin and respiratory organs.

Information pertaining to particular dangers for the environment
NA

Other adverse effects
Possibility of dust explosion if more dust is generated.

Hazard ratings
- Health ................................................................. 0
- Flammability .................................................. 1
- Reactivity .......................................................... 0

NOTE: 0 – No Hazard, 1 – Slight Hazard, 2 – Moderate Hazard, 3 – Serious Hazard, 4 – Severe Hazard

Route of entry
- Skin Contact ...................................................... Yes
- Skin Absorption .............................................. Y
- Eye Contact ........................................................ Yes
- Inhalation ............................................................ Yes (Dust)
- Ingestion .................................................................. Yes

FIRST AID MEASURES

General
IMMEDIATE MEDICAL ATTENTION IS REQUIRED AFTER INHALATION OR AFTER SWALLOWING.
In case of health troubles or doubts, seek medical advice immediately and show this Material Safety Data Sheet.

Contact with the skin
In case of contact, immediately wash skin with soap and copious amounts of water. Assure adequate flushing of the eyes by separating the eyelids with fingers.

Swallowing
If patient is conscious and without convulsion, immediately try to induce vomiting. Never give anything by mouth to an unconscious person, just put patient into a stabilised position. Seek medical advice immediately.
SYMPTOMS AND EFFECTS: nausea, vomiting, convulsions, irregular heartbeat.

Inhalation
If dust inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

FIRE FIGHTING MEASURES

Suitable extinguishing media
Foam, powder, CO₂, Cool containers with water spray.

Extinguishing media to be avoided
Water.

Caution about specific danger in case of fire and fire-fighting procedures
Dust may travel considerable far distances and cause subsequent ignition. When burning, it emits carbon monoxide, carbon dioxide and irritant fumes.

Special protective equipment for fire-fighters
Wear full protective fire-resistant clothing and self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

Person-related safety precautions
Isolate hazard area. Evacuate all unauthorized personnel not participating in rescue operations from the area. Avoid entry into danger area.

Precautions for protection of the environment
Prevent from further spill of substance.

Recommended methods for cleaning and disposal
Dispose off under valid legal waste regulations.

HANDLING AND STORAGE

Information for safe handling
Take precautionary measures against static discharges. Wear recommended personal protective equipment and observe instructions to prevent possible contact of substance with skin and eyes and inhalation. Avoid spill to environment. Dust explosion may take place, avoid dust generation.

Information for storage
Store in cool, well-ventilated place with effective exhaust, away from heat and all sources of ignition. Store in tightly closed container.

Information for specific use
Not applicable.
EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:
- Material: Purified Terephthalic Acid
- Source: US
- Type: TWA
- ppm: NA
- mg/m³: 10
- Notation: Dust


Occupational exposure controls
Collective protection measures: General and local ventilation, effective exhaust Individual protection measures: Personal protective equipment (PPE) for the protection of eyes, hands and skin corresponding with the performed labor has to be kept at disposition for the employees. In the case of continuous use of this equipment during constant work, safety breaks have to be scheduled, if the PPE character requires this. All PPE have to be kept in disposable state and the damaged or contaminated equipment has to be replaced immediately.

Recommended personal protective equipment (PPE):
- Respiratory protection: If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-face piece respirator, airline hood, or full face piece self-contained breathing apparatus.
- Eye protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
- Hand protection: Wear glove of impervious material.
- Body protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Hygiene Measures: Wash hands, forearms and face thoroughly after handling. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental exposure controls
Proceed in accordance with valid air and water legislative regulations. Engineering measures: Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended limits. The engineering controls also need to keep vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Colorless solid
- Odor: Odorless
- Solubility in water: Insoluble
- Relative Density (20 °C, H₂O =1): 1.51
- Melting Point (Sublimates): 300 °C
- Relative Vapour Density (Air = 1): NA
- Flash Point: 260 °C
- Auto ignition: 496 °C
- Vapour pressure (20 °C): 0-134633 hPa
- Explosive limits in air % by volume: NA
- pH: NA
- Viscosity: NA
- Pour point: NA
- Evaporation rate (H₂O =1): NA
- Octanol / water partition coefficient: log Kow: 1.16
- % volatile: NA

STABILITY AND REACTIVITY

Conditions to avoid
- Heat or fire, Dust generation.

Material to avoid
- Oxidizers

Hazardous decomposition products
- Thermal decomposition generates carbon monoxide and carbon dioxide.

Polymerization:
- NA

TOXICOLOGICAL INFORMATION

Acute effects
- Acute toxicity data: NA

Repeated dose toxicity
- Choursonic effects cause irritation by dust.

Sensitisation
- Dust may cause skin irritation.

CMR effects (carcinogenity, mutagenicity, toxicity for reproduction)
- Not a carcinogen.

Toxicokinetics, metabolism, distribution
- NA

ECOLOGICAL INFORMATION

Eco toxicity data
- NA

Persistence and degradability
- Substance is biodegradable.

Bio accumulative potential:
- NA
Results of PBT assessment Persistence and Degradation
NA

Other adverse effects
Environmental Fate: NA.

DISPOSAL CONSIDERATION

Local Legislation
Disposal should be in accordance with applicable regional, national, and local laws and regulations. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

Recommended disposal methods for the substance / preparation
Product reuse or disposal in accordance with valid waste legislative regulations.

Recommended disposal methods for contaminated packaging
Product is transport in vehicle.

Waste management measures that control exposure of humans and environment
Proceed in accordance with valid health, air and water legislative regulations.

Waste regulation
Follow local regulations.

TRANSPORT INFORMATION

International Transport Regulation
ADR/RID (Road/Rail), IMDG (Sea) and ICAO/IATA (Air)
The product is not regulated

Proper Shipping Name .............................................. Not classified
Hazard Class .......................................................... Not classified
UN Number .......................................................... Not classified

Special transport precautionary measures
NA