Material Safety Data Sheet
PURIFIED TEREPHTHALIC ACID

Section 1 - Product Identification

Synonyms : 1-4 Benzene Di carboxylic Acid
Chemical Formula : C8H6O4
Company Identification : Tradeasia International Pte. Limited
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Tel: +65-6227 6365
Fax: +65-6225 6286
Email: contact@chemtradeasia.com
Recommended use : Used in polyester manufacturing.

Section 2 – Composition/Information on Ingredients

Chemical Name	EC No/CAS No	Purity, %
Purified Terephthalic	100-21-0	max. 99.9

Section 3 – Hazards Identification

3.1 Classification
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

3.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4 – Composition/ information on ingredients

4.1 Substances
Formula : C8H6O4
Molecular weight : 166,13 g/mol
CAS-No. : 100-21-0
EC-No. : 202-830-0
No components need to be disclosed according to the applicable regulations.

Section 5 – First-Aid Measures

5.1. Description of first aid measures
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

5.2. Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling

5.3. Indication of any immediate medical attention and special treatment needed
N.A.

Section 6 – Fire Fighting Measures

6.1. Suitable Extinguishing media
Water Foam Carbon dioxide (CO2) Dry powder

6.2. Specific hazards arising from the chemical
Carbon oxides
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.

6.3. Special protective actions for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

6.4 Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 7 – Accidental Release Measures

7.1. Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

7.2. Environmental precautions
Do not let product enter drains..

7.3. Methods and material for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts

Section 8 – Handling and Storage

8.1. Precautions 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.

8.2. Conditions for safe storage, including any incompatibilities
Store in cool, well-ventilated place with effective exhaust, away from heat and all sources of ignition. Store in tightly closed container.

Section 9 – Exposure Controls/Personal Protection

9.1. Control parameters

Ingredients with workplace control parameters

9.2. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

9.3 Control of environmental exposure

Do not let product enter drains.

Section 10 – Physical and Chemical Properties

10.1. Information on basic physical and chemical properties

Appearance	: Colourless solid
Odour	: Odorless
Solubility	: in water Insoluble
Relative Density (H2O=1) @ 20°C	: 1.51
Melting Point °C	: 300°C (Sublimates)
Relative Vapour Density (Air=1)	: NA
Flash point °C	: 260°C
Auto ignition °C	: 496°C
Vapour pressure (hPa) @ 20 °C	: 0 - 134633
Explosive limits in air % by volume	: NA
pH	: NA
Viscosity mPa @25 °C	: NA
Pour point	: NA
Evaporation rate (water=1)	: NA
Octanol/water partition coefficient log Kow	: 1.16
% volatile	: NA

Section 11 – Stability and Reactivity

11.1. Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

11.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

11.3. Possibility of hazardous reactions
N.A

11.4. Conditions to avoid:
N.A

11.5. Incompatible materials
Strong oxidizing agents

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

Section 12 – Toxicological Information

12.1 Acute effects
Acute toxicity data: NA
12.2 Repeated dose toxicity
Chronic effects cause irritation by dust
12.3 Sensitisation
Dust may cause skin irritation.
12.4 CMR effects (carcinogenicity, mutagenicity, toxicity for reproduction)
Not a carcinogen
12.5 Toxicokinetics, metabolism, distribution
NA.

Section 13 – Ecological Information

Ecotoxicity data	**:** NA
Persistence and degradability	**:** Substance is biodegradable
Bioaccumulative potential	**:** NA
Results of PBT assessment Persistence and Degradation	**:** NA
Other adverse effects	
Environmental Fate	**:** NA

Section 14 – Disposal Considerations

14.1. Disposal methods
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.

Section 15 – Transport Information

15.1 International Transport Regulation:
ADR/RID (Road/Rail), IMDG (Sea) and ICAO/IATA (Air)
The product is not regulated
15.2
Proper Shipping Name: Not classified
Hazard Class: Not classified
UN Number: Not classified
15.3 Special transport precautionary measures
Not applicable.

Section 16 – Regulatory Information

15.1. Safety, health and environmental regulations
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

Section 16 : Additional Information

16.1. List of abbreviation and acronyms used in this MSDS
SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List
16.2. List of relevant hazard statements and precautionary statements used in this MSDS
Hazard Statement
H361 d: Suspected of damaging the unborn child
H319: Causes serious eye irritation
H303: May be harmful if swallowed
Precautionary Statements
Prevention
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P264: Wash eyes thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response
P308 + P313: If exposed or concerned: get medical advice/attention.
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.
Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to in accordance with local regulations.

16.3. References

1. Litovitz T L, Norman S A, Veltri J C, Annual Report of the American Association of Poison Control Centers Data Collection System. Am. J. Emerg. Med. (1986), 4, 427-458
2. Denton SM (1996). Acute oral toxicity study in the rat: anhydrous boric acid. Final report. Report no.: 1341/7-1032.
3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88 2580 (1987), PB88 213475/XAB
4. Fail et al., Fund. Appl. Toxicol. (1991) 17, 225-239
5. Heindel et al., Fund. Appl. Toxicol. (1992) 18, 266-277
6. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
7. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM; ELSEVIER 2009
8. Robbins WA, Xun L, Jia J, Kennedy N, Elashoff DA, Ping L. ;ELSEVIER 2009;(Reproductive Toxicology)
9. Hansveit and Oldersma, 2000; TNO Nutrition and Food Research Institute. Report No. V99.157.
10. Gersich, FM (1984a). Environ.Toxicol.Chem., 3 #1, 89-94 (1984)
11. Soucek et al., 2010. Illinois Natural History Survey, University of Illinois.

For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

16.4. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.