

**ATTACHMENT 4 – MSDS PURIFIED TEREPHTHALIC ACID (PTA)**

## MATERIAL SAFETY DATA SHEET

### PURIFIED TEREPHTHALIC ACID (PTA)

#### 1. PRODUCT IDENTIFICATION AND USE

<b>Product name:</b>	PTA (Purified Terephthalic Acid)
<b>Synonyms:</b>	1, 4-benzenedicarboxylic acid
<b>CAS number:</b>	100-21-0
<b>EINECS number:</b>	2028300
<b>Product use:</b>	Raw material to produce plastic
<b>Manufacturer/supplier:</b>	INTERQUISA CANADA L.P.
<b>Address:</b>	<b>10200 Sherbrooke Street East</b> Montreal (Quebec) Canada H1B 1B4
<b>24 hour emergency number:</b>	<b>(514) 645-7887</b>
<b>Canutec assist:</b>	1-613-996-6666
<b>Chemtrec assist:</b>	1-800-424-9300

#### 2. HAZARDOUS COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>% WEIGHT</u>
Terephthalic acid	100-21-0	100 %

#### 3. PHYSICAL AND CHEMICAL DATA

<b>Boiling point:</b>	Sublimation above 300°C (572°F)
<b>Melting point:</b>	Sublimation above 300°C (572°F)

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<b>Vapor pressure:</b>	Less than 0.01 mmHg @ 20°C (68°F)
<b>Vapor density (Air = 1):</b>	5.74
<b>Pour point:</b>	Not determined
<b>Molecular formula:</b>	C <sub>8</sub> H <sub>6</sub> O <sub>4</sub>
<b>Molecular weight:</b>	166.13
<b>pH:</b>	Not determined
<b>Octanol/water partition Coefficient:</b>	91,2 (according to NIOSH log Pow = 1,96)
<b>Viscosity:</b>	Not determined
<b>Evaporation rate (water=1):</b>	Not determined
<b>% volatile:</b>	Not determined
<b>Specific gravity:</b>	1.51 g/cm <sup>3</sup>
<b>Odor / appearance:</b>	White crystals or powder with a slight acrid odor.

#### 4. FIRE AND EXPLOSION DATA

<b>Flash point:</b>	260°C (500°F)
<b>Auto ignition :</b>	496°C (924.8°F)
<b>Lower flammability limit:</b>	0.05 g/L (dust)
<b>Upper flammability limit:</b>	Not determined
<b>Explosion data:</b>	Sensitivity to mechanical impact: not sensitive, stable material.  Sensitivity to static charge: can accumulate a static charge.

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**Combustion and thermal decomposition products:**

Carbon monoxide and carbon dioxide and other toxic chemicals.

Incomplete combustion may produce acrid smoke and irritating fumes.

**Basic firefighting procedures:**

Use dry chemical, alcohol foam, all purpose AFFF or water spray to extinguish fire. Water or foam may cause frothing, with further application leading to boilover. Foam may have limited effectiveness on three dimensional fires. Use water spray to cool fire-exposed containers, structures and to protect personnel. Use water to flush spills away from sources of ignition. Do not flush down public sewers or other drainage systems. Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus with full face mask and full protective equipment.

**Unusual fire and Explosion hazards:**

Dusts may form explosive mixtures in air. This material may burn at high temperatures. During a fire, irritating/toxic gases and fumes may be generated. Under certain conditions, a dust cloud of terephthalic acid may explode when ignited by a spark or flame.

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## 5. STABILITY AND REACTIVITY DATA

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**Stability/incompatibility:**

Stable during a normal use. Hazardous polymerisation does not occur. Incompatible with strong oxidizers and bases. No hazardous product are produced in contact with water.

**Hazardous reactions/  
Decomposition products:**

Combustion may produce CO and CO<sub>2</sub>.

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## 6. TOXICOLOGICAL PROPERTIES / HAZARD IDENTIFICATION

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**Emergency overview:**

Caution, dust may form explosive mixtures in air.

**Route of entry:**

Skin contact, eye contact, inhalation, ingestion.

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**LD50 (oral, mouse):** Greater than 5,000 mg/kg .

#### EFFECTS OF ACUTE EXPOSURE TO PRODUCT

**Eye Contact:** May cause irritation.

**Skin Contact:** May cause slight skin irritation.

**Inhalation:** May cause respiratory tract irritation. Respiratory tract irritation, if severe, can progress to pulmonary edema which may be delayed in onset up to 24-72 hours after exposure in some cases.

**Ingestion:** May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea.

#### EXPOSURE LIMITS

	<u>TWA</u>	<u>STEL</u>
<b>OSHA</b> (Occupational Safety and Health Administration)	None	None
<b>ACGIH</b> (American Conference of Governmental Industrial Hygienists)	10 mg/m <sup>3</sup>	None
<b>CSST</b> (Health and Safety Regulations)	10 mg/m <sup>3</sup>	None

**Effects of chronic exposure to product:** No information available on human experiments

**Carcinogenicity:** No information available on human experiments

**Teratogenicity/embryotoxicity:** No information available on human experiments

**Reproductive toxicity:** No information available on human experiments

**Mutagenicity:** No information available on human experiments

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## 7. ACCIDENTAL RELEASE MEASURES

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Where possible, use vacuum suction with HEPA filters to clean up spilled product. Use wet sweeping or a dust suppressant where sweeping is necessary. Avoid clean up procedures that may result in water pollution. Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material.

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#### 8. FIRST AID MEASURES

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<b>Eye:</b>	Flush immediately with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
<b>Skin:</b>	Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.
<b>Inhalation:</b>	If symptoms develop, remove affected person from source of exposure. If breathing is difficult, administer 100% humidified supplemental oxygen with assisted ventilation as required. If respiratory symptoms persist, get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to dilute stomach contents. Do not give anything by mouth if victim is semi-conscious or unconscious. Get medical attention for substantial ingestions and/or gastrointestinal symptoms.
<b>Note to physician:</b>	Supportive care.

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#### 9. HANDLING AND STORAGE

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Store in tightly closed containers in cool, dry, isolated, well-ventilated area away from heat, sources of ignition, oxidizers and corrosives. Keep away from heat, sparks and flame. Keep containers closed. Dust control and material transport equipment involved in the processing of this material should contain control measures to prevent dust accumulation or production of dust concentrations above explosive limits.

Minimize dust generation during handling and contact. Avoid inhalation of dust. Assure that proper personal protection measures are taken when opening or entering confined storage vessels. If product stored in silos, bins or containers, prevention of static build-up and blanketing atmosphere with inert gas (less than 10% vol. of oxygen) is strongly advised.

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#### 10. OTHER EXPOSURE CONTROL INFORMATION / PERSONAL PROTECTION

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##### PERSONAL PROTECTION EQUIPMENT (PPE)

<b>Eye Protection:</b>	Wear safety glasses or chemical goggles to prevent eye contact with dusts.
<b>Skin Protection:</b>	When working with this substance, wear appropriate protective gloves.
<b>Respiratory Protection:</b>	If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn. NIOSH approved respirator for particulates with a TLV of greater than 0.05 mg/m <sup>3</sup> is generally acceptable except supplied air respirators are required for high airborne dust concentrations. Ventilation and other forms of engineering controls are often the preferred means for controlling chemical exposures. Respiratory protection may be needed for non-routine or emergency situations.

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#### 11. DISPOSAL CONSIDERATIONS

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See federal, provincial and local government requirements prior to disposal. Disposal by controlled incineration or secure landfill may be acceptable.

##### U.S. FEDERAL REGULATIONS

This substance, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however it could be characteristically hazardous if it is considered toxic, corrosive, ignitable, or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This substance could also become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. Check regulation 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations 40 CFR 262, 263, 264, 268, and 270 apply. Chemical additions, processing and otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, provincial and local regulations.

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#### 12. TRANSPORTATION INFORMATION

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**CANADIAN TRANSPORTATION OF DANGEROUS  
GOODS REGULATIONS (TDG)**

Not applicable

**U.S. DEPARTMENT OF TRANSPORTATION (DOT)**

**Proper Shipping Name:**

Not applicable

**Hazard Class:**

Not applicable

**UN/NA Code:**

Not applicable

**Packing Group:**

Not applicable

**Bill of Lading Description:**

Not applicable

**Labels Required:**

Not applicable

**Placards Required:**

Not applicable

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#### 13. REGULATORY INFORMATION

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**CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM  
(WHMIS)**

This product is not controlled by the WHMIS.

**U.S. FEDERAL REGULATIONS**

**Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA):**

This material, as supplied, contains no hazardous substances regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302), or any extremely hazardous substances regulated under the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355), and thus a release of this material as supplied has no reporting requirements under these regulations. There may be additional specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**Toxic Substance Control Act (TSCA):**

All components of this product are listed on the TSCA inventory.





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**Clean Water Act (CWA):**

Neither the product or its components are listed under Federal regulations. Contact your local/state authorities to determine if substances are regulated under their jurisdiction.

**Clean Air Act (CAA):**

Component(s) are listed under various sections of the Clean Air Act. Contact your local/state authorities to determine if substances are regulated under their jurisdiction.

**Superfund Amendments and Reauthorization Act (SARA) Title III Information**

Listed below are the hazard categories for SARA Section (311/312 370):

(40 CFR 372):

Immediate Hazard: X  
Delayed Hazard: -  
Pressure Hazard: -  
Fire Hazard: -  
Reactivity Hazard: -

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>% WEIGHT</u>
No ingredients listed in this section	--	--

**STATE REGULATIONS****California:**

This product contains the following chemical(s) known to the State of California to cause cancer, birth defects or reproductive harm:

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>% WEIGHT</u>
No ingredients listed in this section	--	--

**Massachusetts:**

This product contains the following chemical(s) which are listed as an extraordinarily hazardous substance as defined in Massachusetts Right-To-Know Law, Department of Health, Chapter 105, Section 670.005.

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>% WEIGHT</u>
No ingredients listed in this section	--	--



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#### Pennsylvania:

This product contains the following chemical(s) which are listed in Pennsylvania Right-To-Know Law, Section 3800.

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>% WEIGHT</u>
No ingredients listed in this section	--	--

#### 14. ENVIRONMENTAL INFORMATION

The product is known to be biodegradable. The bioaccumulation in several species is still being object of research.

#### 15. OTHER INFORMATION

<u>National Fire Protection Index</u>	<u>NFPA</u>
Health:	0
NFPA-Flammability:	1
NFPA-Reactivity:	0

The above data are based on test and experience which INTERQUISA CANADA L.P. believes reliable and are supplied for information purposes only.

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#### 16. INFORMATION ON PREPARATION

##### THIS DATA SHEET WAS PREPARED BY:

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##### PLANT/HEAD OFFICE

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