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## **P-XYLENE- MATERIAL SAFETY DATA SHEET**

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### **24 Hour EMERGENCY CONTACT**

**U.S- CHEMTREC 1-800-424-9300**

**CANADA- CANUTEC 613-996-6666**

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## **1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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### **Matheson Tri-Gas, Inc.**

*The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.*

#### **USA**

959 Route 46 East  
Parsippany, New Jersey  
07054-0624 USA  
**Phone: 973-257-1100**

#### **CANADA**

530 Watson Street  
Whitby, Ontario  
L1N 5R9 Canada  
**Phone: 905-668-3570**

**SUBSTANCE: P-XYLENE**

**SYMBOL:** C<sub>6</sub>H<sub>6</sub>

**TRADE NAMES/SYNONYMS:**

BENZENE, 1,4-DIMETHYL-; P-DIMETHYLBENZENE; 1,4-DIMETHYLBENZENE; P-METHYLTOLUENE; 4-METHYLTOLUENE; 1,4-XYLENE; P-XYLOL; RCRA U239; STCC 4909351; UN 1307; O-5082; MAT17940; RTECS ZE2625000

**CHEMICAL FAMILY:** hydrocarbons, aromatic

**CREATION DATE:** Jan 24 1989

**REVISION DATE:** Mar 16 1999

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## 2. COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT:** P-XYLENE

**CAS NUMBER:** 106-42-3

**EC NUMBER (EINECS):** 203-396-5

**EC INDEX NUMBER:** 601-022-00-9

**PERCENTAGE:** 100.0

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## 3. HAZARDS IDENTIFICATION

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**NFPA RATINGS (SCALE 0-4):** HEALTH=2 FIRE=3 REACTIVITY=0

**WHMIS CLASSIFICATION:** BD2

**EC CLASSIFICATION (ASSIGNED):**

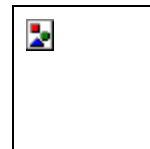
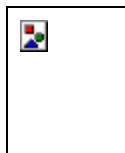
Flammable

Xn Harmful

Xi Irritant

R 10-20/21-38

EC Classification may be inconsistent with independently-researched data.



### EMERGENCY OVERVIEW:

**Color:** colorless

**Physical Form:** liquid

**Odor:** sweet odor

**Major Health Hazards:** eye irritation

**Physical Hazards:** Flammable liquid and vapor. Vapor may cause flash fire.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**Short Term Exposure:** irritation, low body temperature, ringing in the ears, nausea, vomiting, stomach pain, headache, drowsiness, symptoms of drunkenness, visual disturbances, lung congestion, kidney damage, liver damage, coma

**Long Term Exposure:** tingling sensation, menstrual disorders, infertility, reproductive effects, convulsions

**SKIN CONTACT:**

**Short Term Exposure:** irritation, blisters

**Long Term Exposure:** rash

**EYE CONTACT:**

**Short Term Exposure:** irritation (possibly severe), tearing

**Long Term Exposure:** blurred vision

**INGESTION:**

**Short Term Exposure:** digestive disorders, symptoms of drunkenness, lung congestion, kidney damage, liver damage

**Long Term Exposure:** reproductive effects

**CARCINOGEN STATUS:**

**OSHA:** N

**NTP:** N

**IARC:** N

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## **4. FIRST AID MEASURES**

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**INHALATION:**

When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.

**SKIN CONTACT:**

Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

**EYE CONTACT:**

Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

**INGESTION:**

Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration.

If person is unconscious, turn head to side. Get medical attention immediately.

**NOTE TO PHYSICIAN:**

For inhalation, consider oxygen. For ingestion, consider gastric lavage.

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**5. FIRE FIGHTING MEASURES**

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**FIRE AND EXPLOSION HAZARDS:**

Severe fire hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

**EXTINGUISHING MEDIA:**

regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

**FIRE FIGHTING:**

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Water may be ineffective.

**FLASH POINT:**

81 F (27 C) (CC)

**LOWER FLAMMABLE LIMIT:**

1.1%

**UPPER FLAMMABLE LIMIT:**

7.0%

**AUTOIGNITION:**

982 F (528 C)

**FLAMMABILITY CLASS (OSHA):**

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**6. ACCIDENTAL RELEASE MEASURES**

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**AIR RELEASE:**

Reduce vapors with water spray. Stay upwind and keep out of low areas.

**SOIL RELEASE:**

Dig holding area such as lagoon, pond or pit for containment. Dike for later disposal. Absorb with sand or other non-combustible material. Collect with absorbent into suitable container.

**WATER RELEASE:**

Cover with absorbent sheets, spill-control pads or pillows. Neutralize. Collect with absorbent into suitable container. Absorb with activated carbon. Remove trapped material with suction hoses.

Collect spilled material using mechanical equipment.

**OCCUPATIONAL RELEASE:**

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Reportable Quantity (RQ): Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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## 7. HANDLING AND STORAGE

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Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Protect from physical damage. Store outside or in a detached building. Store with flammable liquids. Keep separated from incompatible substances. Keep separated from incompatible substances.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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### EXPOSURE LIMITS:

**P-XYLENE:**

**XYLENE:**

100 ppm (434 mg/m<sup>3</sup>) OSHA TWA

150 ppm (651 mg/m<sup>3</sup>) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)

100 ppm (434 mg/m<sup>3</sup>) ACGIH TWA

150 ppm (651 mg/m<sup>3</sup>) ACGIH STEL

100 ppm (434 mg/m<sup>3</sup>) NIOSH recommended TWA 10 hour(s)

150 ppm (651 mg/m<sup>3</sup>) NIOSH recommended STEL

**VENTILATION:** Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Wear appropriate chemical resistant clothing.

**GLOVES:** Wear appropriate chemical resistant gloves.

**RESPIRATOR:** The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

**900 ppm**

Any chemical cartridge respirator with organic vapor cartridge(s).

Any powered, air-purifying respirator with organic vapor cartridge(s).

Any supplied-air respirator.

Any self-contained breathing apparatus with a full facepiece.

**Escape -**

Any air-purifying respirator with a full facepiece and an organic vapor canister.

Any appropriate escape-type, self-contained breathing apparatus.

**For Unknown Concentrations or Immediately Dangerous to Life or Health -**

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** liquid

**APPEARANCE:** clear

**COLOR:** colorless

**ODOR:** sweet odor

**MOLECULAR WEIGHT:** 106.17

**MOLECULAR FORMULA:** C8-H10

**BOILING POINT:** 280 F (138 C)

**FREEZING POINT:** 55 F (13 C)

**VAPOR PRESSURE:** 8.6 mmHg @ 25 C

**VAPOR DENSITY (air=1):** 3.7

**SPECIFIC GRAVITY (water=1):** 0.8611

**WATER SOLUBILITY:** insoluble

**PH:** Not available

**VOLATILITY:** Not available

**ODOR THRESHOLD:** 0.47 ppm

**EVAPORATION RATE:** 0.7 (butyl acetate=1)

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

**SOLVENT SOLUBILITY:**

**Soluble:** alcohol, ether, benzene, acetone, organic solvents

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## 10. STABILITY AND REACTIVITY

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**REACTIVITY:**

Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:**

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.

**INCOMPATIBILITIES:**

acids, combustible materials, oxidizing materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: oxides of carbon

**POLYMERIZATION:**

Will not polymerize.

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**11. TOXICOLOGICAL INFORMATION**

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**P-XYLENE:****TOXICITY DATA:**

4550 ppm/4 hour(s) inhalation-rat LC50; 5 gm/kg oral-rat LD50

**LOCAL EFFECTS:**

Irritant: inhalation, skin, eye

**ACUTE TOXICITY LEVEL:**

Moderately Toxic: inhalation, ingestion

**TARGET ORGANS:**

central nervous system

**REPRODUCTIVE EFFECTS DATA:**

Available.

**ADDITIONAL DATA:**

Alcohol may enhance the toxic effects. Stimulants such as epinephrine may induce ventricular fibrillation.

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**12. ECOLOGICAL INFORMATION**

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**ECOTOXICITY DATA:****FISH TOXICITY:**

8800 ug/L 96 hour(s) LC50 (Mortality) Guppy (*Poecilia reticulata*)

**INVERTEBRATE TOXICITY:**

3600 ug/L 24 hour(s) EC50 (Immobilization) Water flea (*Daphnia magna*)

**ALGAL TOXICITY:**

4400 ug/L 8 hour(s) EC50 (Growth) Green algae (*Selenastrum capricornutum*)

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**13. DISPOSAL CONSIDERATIONS**

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Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U239.  
Dispose in accordance with all applicable regulations.

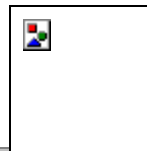
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## 14. TRANSPORT INFORMATION

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**U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:**

Xylenes-UN1307; 3; II; Flammable liquid



## 15. REGULATORY INFORMATION

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**U.S. REGULATIONS:**

**TSCA INVENTORY STATUS:** Y

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

**CERCLA SECTION 103 (40CFR302.4):** Y

Xylene: 100 LBS RQ

**SARA SECTION 302 (40CFR355.30):** N

**SARA SECTION 304 (40CFR355.40):** N

**SARA SECTION 313 (40CFR372.65):** Y

Xylene

**SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):**

**ACUTE:** Y

**CHRONIC:** N

**FIRE:** Y

**REACTIVE:** N

**SUDDEN RELEASE:** N

**OSHA PROCESS SAFETY (29CFR1910.119):** N

**STATE REGULATIONS:**

California Proposition 65: N

**EUROPEAN REGULATIONS:**

**EC NUMBER (EINECS):** 203-396-5

**EC RISK AND SAFETY PHRASES:**

R 10	Flammable.
R 20/21	Harmful by inhalation and in contact with skin.
R 38	Irritating to skin.
S 2	Keep out of reach of children.
S 25	Avoid contact with eyes.

**CONCENTRATION LIMITS:**

C $\geq$ 20% Xn R 20/21-38

12.5% $\leq$ C<20% Xn R 20/21



## 16. OTHER INFORMATION

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