

(MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene) Page: 1 of 12

Revision Number: 1

Health

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING

Identification of the substance or

preparation:

MDL information system INC.

1281 Murfreesboro road suite 300 Nashville

Country of origin: Iran (Islamic Republic of Iran)

**CAS Number:** 106-42-3

Synonyms: Benzene; 1,4-dimethyl; P-di methyl Benzene; 1,4-

dimethylebenzene

P-methyl toluene; 4-methyltoluene; 1,4-xylene P-

Xylol; Xylene

P-phenylenebis (methylene) RCRA U239 STCC 4909351 UN 1307 C8H10, OHS17940, RTECS

ZE2625000

00982188839511

Company/undertaking identification National Petrochemical Company

Iran Petrochemical Commercial Company (IPCC)

Manufacturer subcontractor: None

Emergency phone number: 00982188881735

Contact email: msds@petrochem-ir.net

Fax:

Association/Organization: None

Use of the substance/Preparation: Xylene and the individual isomers are primarily

man-made chemicals .p-xylene is used as a chemical intermediate for the synthesis of terephetalic acid for polyester resins and fibers; as a chemical intermediate in the manufacture of plastics, vitamin and pharmaceutical synthesis and insecticide; and

as a solvent for adhesives and coating.

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances: NFPA ratings (scale 0-4): health=2

Fire=3 reactivity=0

Hazardous label(s): DANGER! HARMFUL OR FATAL IF

SWALLOWED. VAPOR HARMFUL. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE EYE IRRITATION. CAUSES

IRRITATION TO SKIN AND RESPIRATORY



(MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO

Product Name:

PX (Paraxylene) Page: 2 of 12

Revision Number: 1



TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CHRONIC EXPOSURE CAN CAUSE ADVERSE LIVER, KIDNEY, AND BLOOD EFFECTS. FLAMMABLE LIQUID AND

VAPOR.

Toxicological characteristics:

Substances present at a concentration

below the minimum danger:

Other component:

See section 11

N/A

Percentage: 100.0

### 3. IDENTIFICATION OF HAZARDS

Risk phrases: Warning! Flammable .Causes eye and skin irritation.

Can be harmful if high concentrations are inhaled.

Harmful or fetal if liquid is aspirated into longs.

Skin contact: Short term exposure: rash

Long term exposure: blurred vision

**Eye contact:** Short term exposure: Irritation (Possibly severe)

Long term exposure :Blurred vision

If swallowed: Short term exposure: digestive disorders, symptoms

of drunkenness, lung congestion, kindly damage, liver

damage.

Other information: Major health hazards: respiratory tract irritation skin

irritation; eye irritation; central nervous system

depression.

Physical hazard: flammable liquid and vapour.

Vapour may cause flash fire electrostatic charges may

be generated by flow agitation etc.

## 4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor NEVER induce swallowing in an unconscious person.

Skin contact: Take off contaminated clothing and shoes. Wash immediately with

plenty of water at least 15 minutes. Get medical attention. An eye wash fountain safety shower and general washing

facility must be available to work area

In case of exposure by

inhalation:

if adverse effects occur remove to uncontaminated area give artificial respiration if not breathing. If breathing is difficult



According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene) Page: 3 of 12

Revision Number: 1

Reactivity

Health

oxygen should be administered by qualified personnel. Get immediate medical attention.

In case of splashes or contact with eyes:

Flush eyes with plenty of water for at least 15 minute. Then get immediate medical attention.

In case of swallowing: Note of physician: Contact local poison control center or physician immediately never make an unconscious person vomit or drink fluids. When omitting occurs keep head lower than hips to help prevent aspiration. If person is unconscious turn head to side. Get medical attention immediately.

### 5. FIRE FIGHTING MEASURES

Flammable class: Flammable liquid. Flammability class (OSHA): IC

Flash point: 27°C Lower flammable limit: 1.1%

Upper flammable limit: 7.0 %

Auto ignition: 982°F(528°C)

Suitable extinguishing media: Regular dry chemical, carbon dioxide, water, regular

foam.

Large fires: use regular foam or flood with fine water

spray.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: Special protective equipment for fire fighting:

Other information:

Incomplete burning can produce carbon monoxide and /or carbon dioxide and other harmful products.

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.

Server fire hazard. Vapour/air mixtures are explosive above flash point. The vapour is heavier than air. Vapour or gases may ignite at distant



According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene) Page: 4 of 12

Revision Number: 1

Reactivity

Health

ignition sources and flash back. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use proper protective equipment as indicated in

section 8.

**Environmental precautions:** Remove or shut off all sources of ignition. Remove

mechanically or contain on an absorbent material such as dry sand or earth .keep out of sewers and

waterways.

Methods for cleaning up and disposal: Air release:

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

Soil release:

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

## Water release:

Cover with absorbent sheet s 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 source 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. Remove source of ignition. Keep unnecessary people away isolate hazard area and deny entry. Notify local emergency planning contaminated and state emergency response commission for release greater than or equal to RQ



According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Product Name:

PX (Paraxylene)

Page: 5 of 12
Revision Number: 1
230
Reactivity
Flammability
Health

(U.S sara section 304) is 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).

Other information: None

### 7. HANDLING AND STORAGE

Storage:

he regulations relating to storage premises apply to workshop where the product is handled:

Handling: Wash thoroughly after handling .remove

contaminated clothing and wash before reuse.

Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue (liquid or vapor ) and can be dangerous .Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Use only with adequate ventilation avoid

breathing vapor or mist.

Storage: store and handle in accordance with all current regulations and standards. Subject to

storage regulations: U.S OSHA 29CFR 1910.106.

Grounding and bonding required. Protected from physical damage. Store outside or in a detached building. Store with flammable liquids. Keep separated from incompatible substances. Keep

separated from incompatible substances.

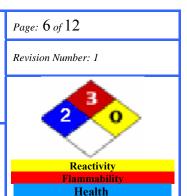
Specific use(s): N/A



According to the Directives 91/155/CEE-2001/58/CE-ISO

Product Name:

PX (Paraxylene)



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values: 100 ppm (435 mg/m3) OSHA TWA

150 ppm (651 mg/m3) OSHA STEL (vacated by 58 FR 35338,

Jun,30, 1993)

100 ppm ACGIH STEL

100 ppm (435 mg/m3) NOISH recommended TWA 10 hour(s)

150 ppm (655 mg/m3) NOISH recommended STEL

440 mg/m3 (100 ml/m3) DFG MAK (peak limitation category-

II, 1) (skin)

100 ppm (441 mg/m3) UK OES TWA (skin)

150 ppm (662 mg/m3) UK OES STEL (skin)

Exposure controls: Facilities storing or utilizing this material should be equipped

with an eye wash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne

concentrations below the permissible exposure limits.

Personal protective

equipment: Eye protection: N/A

Wear splash resistant safety goggles. Provide an emergency

eye wash fountain and quick drench shower in the immediate

work area.

Respiratory protection: The following respirators and maximum use concentrations

are drawn from NOISH and /or OSHA 900 ppm. Any appropriate escape type self contained breathing apparatus. For unknown concentrations or immediately dangerous to life or health any supplied air respirator with full face piece and operated in a pressure demand or other positive pressure

mode in combination with separate escape supply.

Hand protection:

Skin and body protection:

**Health measures:** 

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing.

Measurement method: charcoal tube; carbon disulfide; gas chromatography with flame ionization detection

NOISH IV # 1501 aromatic hydrocarbons.

**Environmental exposure** 

controls:

Use adequate general or local exhaust ventilation

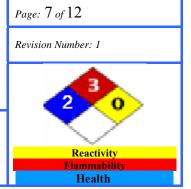


(MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene)



### 9. PHYSICAL AND CHEMICAL PROPERTIES

General information: Physical state: liquid

Appearance (at 20°C):

Colour:

Odour:

pH (at 20°C):

Boiling point/range (°C):

clear

colourless

sweet odour

Not available

280°F (138°C)

Flash point (°C):

Flammability:

Auto-ignition temperature:

Explosive properties:

Oxidising properties:

N/A

N/A

Vapour pressure (at 20°C): 8.6 mmHg @ 25° C

Density (at 20°C): Vapour density (air=1): 3.7

Solubility (at 20°C): Water solubility: insoluble

Soluble: alcohol, ether, benzene, acetone, organic

solvents

Viscosity (40°C): N/A

Evaporation rate: 0.7 (butyl acetate=1)
Other information: Molecular weight: 106.17

Molecular formula:C8-H10

### 10. STABILITY AND REACTIVITY

Stability: Reactivity: stable at normal temperatures and

pressure.

Conditions to avoid: Avoid heat, flames, sparks and other source of

ignition.

Material to avoid: Avoid acids, combustible materials; oxidizing

materials, chlorine, flurine, and other strong

oxidizers.

Hazardous decomposition products: Burning can produce carbon monoxide and /or

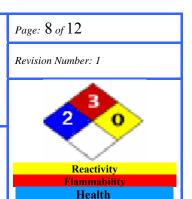
carbon dioxide and other harmful products.



According to the Directives 91/155/CEE-2001/58/CE-ISO

Product Name:

PX (Paraxylene)



## 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Sub chronic - chronic toxicity:

5 mg/kg oral-rat LD50, 4550 PPM/4 hour(s) inhalation rat LC 50; 3810 mg/kg intraperitoneal rat LD50 15 gm/m3 inhalation mouse LCLO; 2450 ul/kg intraperitoneal mouse LD50;>8350 ppm/4 hours inhalation guinea pig LC;2 gm/kg intraperitoneal mammal LDLO;5 mg/kg subcutaneous mammle LDLO carcinogen status: IARC; human inadequate evidence animal inadequate evidence animal inadequate evidence group 3 ACGH: A4 not classifiable as a human carcinogen local effects: irritant: inhalation, skin, eye Repeated or prolonged inhalation of vapours above 200 ppm may cause nausea vomiting, abdominal pain and anorexia. Other common complaints include headache, fatigue lassitude, irritability, breathing difficulties and flatulence. Effects on the nervous system may result in excitation followed by depression parenthesis tremors apprehension impaired memory insomnia vertigo and tinnitus. Effects on reaction time manual coordination body balance and EEG occurred with repeated exposure to 90 ppm of m-xylene. Sweetish taste in the mouth dry nose and throat strong thirst mucosal hemorrhage and anemia have been reported. Effects on the liver kidney cardiovascular system and the bone marrow have also been reported although the latter has been questioned. Exposure of rabbits to 1150 ppm for 40-55 days resulted in a reversible decrease in the red and white cell count and an increase in the platelets. One case of an apparent epileptiform seizure following a relatively brief exposure has occurred. Women may develop menstrual disorders such as menorrhagia or metrorhagia infertility and pathological pregnancy conditions including toxicosis danger of miscarriage and hemorrhaging during delivery. Repeated exposure of pregnant mice rats rabbits to the individual or the mixed isomers has resulted in maternal effects and effects on fertility on the embryo or fetus and specific developmental abnormalities. Included among these effects are fetal death fetoxicity pre-and post implantation mortality abortion craniofacial and musculosketal abnormalities and extra embryonic structures.

Sensibilization:

Aspiration of this product into the lungs can cause chemical pneumonia and can be fetal .Aspiration into the lung can occur while vomiting after



(MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Product Name:

PX (Paraxylene) Page: 9 of 12 Revision Number: 1

Reactivity Health

ingestion of this product. Insufficient information. **Carcinogenicity:** 

**Reproductive effects:** There is no specific information available on

Paraxylene.

**Human experience:** N/A Other information: None

### 12. ECOLOGICAL INFORMATION

Fish toxicity: 8800 ug/L 96 hours LC50 (mortality) **Ecotoxicity:** 

guppy (poecilia reticulata)

Invertebrate toxicity: 3600 ug/L24 hours EC50 (immobilization) water flea (daphnia manga)

Algal toxicity: 4400 ug/L 8 hours EC50 (growth) green

algae (Selenastrum capricornutum)

Bio accumulative potential: Ecological testing has not been conducted on this

product.

**Mobility:** Ecological testing has not been conducted on this

product.

Persistence and degradability: Ecological testing has not been conducted on this

product.

Other adverse effects: N/A

## 13. DISPOSAL CONSIDERATIONS

**Disposal of product:** Subject to disposal regulation: U.S EPA 40 CFR

262 hazardous water number (s): U239. dispose in

accordance with all applicable regulations.

Disposal of packaging: The container for this product can present

explosion or fire hazards, even when emptied! TO avoid risk of injury, do not cut, punctuate, or weld on or near this container .Since the emptied containers retain product residue, follow label warnings

even after container is emptied.

#### 14. TRANSPORT INFORMATION

Land transport:

U.S dot 49 CFR 172.101:



According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Product Name:

PX (Paraxylene) Page: 10 of 12

Revision Number: 1



Proper shipping name: xylene

ID number: UN1307

Hazard class: OR DIVISION: 3

Packing Group: II

Labeling requirements: flammable liquid

Packing authorizations:

**Exception: 49CFR 173.150** 

Non-bulk packaging: 49CFR 173.202

3

Bulk packaging: 49 CFR 173.242

ADR/RID: not determined

Maritime transport ( IMO/IMDG ):

Class: 3.3 (9)

Shipping name: Xylenes

Class: 3.3(9) Packing group: Ш **UN number:** 1307 Shipping name: xylenes

Air transport (ICAO/IATA):

Class: Subsidiary class: 9 Packing group: Ш

#### 15. REGULATORY INFORMATION

**Hazardous label(s):** 

Cercla section 102a/103 hazardous substance (40CFR 302.4):P-xylene: 100 LBS RQ

Sara title III section 302 extremely hazardous substances (40 CFR 355.30): not regulated

Sara title III section 304 extremely hazardous substances (40CFR 355.40): not regulated

Sara title III sara section 311/312 hazardous **categories (40CFR 370.21):** 

**Acute: Yes** Chronic: No

Fire: yes



According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene)

Page: 11 of 12

Revision Number: 1

Reactivity

Health

Reactive: No

Sudden release: No

Sara title III section 313 (40 CFR 372.65): P-

xylene

OSHA process safety (29 CFR 1910.119): not

regulated

**State regulations:** 

California proposition 65: not regulated

Canadian regulations:

Whims classification: not determined

**European regulations:** 

EC classification (assigned):

Flammable

XN harmful

XI irritant

EC classification may be inconsistent independently researched data.

Danger/hazard symbol: XN harmful

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 children S 25

avoid contact with eyes

**Concentration limits:** 

C>=20% xn R 20/21-38

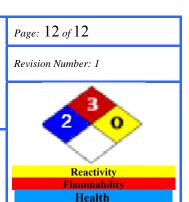
12.5%<=C<20%xn R 20/21



According to the Directives 91/155/CEE-2001/58/CE-ISO
11014-1

Product Name:

PX (Paraxylene)



German regulations:

Water hazards class (WGK):

State of classification: VwVwS

Classification under hazard to water: 2

**National inventory status:** 

U.S inventory (TSCA): listed on inventory

TSCA 12(b) export notification: not listed

Safety phrases: Keep out of reach of children .avoid

contact with eyes.

Risk phrases: 11 20 /21 38

Flammable. Harmful by inhalation and in

contact with skin. Irritating to the skin.

16. OTHER INFORMATION

MSDS summary of changes

Section 11 toxicological information

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