

# SAFETY DATA SHEET

Creation Date 24-Mar-2014

Revision Date 20-Dec-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

<b>Product Name</b>	p-Xylene
<b>Cat No. :</b>	<b>AC445680000, AC445680010, AC445680025, AC445681000</b>
<b>CAS No</b>	106-42-3
<b>Synonyms</b>	1,4-Dimethylbenzene

**Recommended Use**  
Uses advised against

Laboratory chemicals.  
Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Flammable liquids	Category 3
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS), Respiratory system.	
Aspiration Toxicity	Category 1

### Label Elements

#### Signal Word

Danger

**Hazard Statements**

Flammable liquid and vapor  
May be fatal if swallowed and enters airways  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
Harmful in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wash face, hands and any exposed skin thoroughly after handling  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground and bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting equipment  
Keep cool  
Take action to prevent static discharges  
Use non-sparking tools

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Call a POISON CENTER or doctor if you feel unwell

**Skin**

Call a POISON CENTER or doctor if you feel unwell  
If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
Take off contaminated clothing and wash before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Do NOT induce vomiting

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Harmful to aquatic life with long lasting effects

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
p-Xylene	106-42-3	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Risk of serious damage to the lungs (by aspiration).
<b>Ingestion</b>	Aspiration hazard. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.
<b>Most important symptoms and effects</b>	Difficulty in breathing. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.
<b>Unsuitable Extinguishing Media</b>	Water may be ineffective
<b>Flash Point</b>	25 °C / 77 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	465 °C / 869 °F
<b>Explosion Limits</b>	
Upper	7.0 vol %
Lower	1.1 vol %
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrocarbons. Aldehydes.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

**Health**  
3

**Flammability**  
3

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

### Personal Precautions

Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Avoid release to the environment. See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system. Collect spillage.

**Methods for Containment and Clean Up** Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and Storage

### Handling

Use only under a chemical fume hood. Use spark-proof tools and explosion-proof equipment. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only non-sparking tools.

### Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
p-Xylene	TWA: 20 ppm		IDLH: 900 ppm REL = 100 ppm (TWA) REL = 435 mg/m <sup>3</sup> (TWA) STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>	TWA: 100 ppm STEL: 150 ppm

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH: NIOSH - National Institute for Occupational Safety and Health

### Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended Filter type:** Organic gases and vapours filter. Type A. Brown. conforming to EN14387.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Appearance**

<b>Physical State</b>	Liquid	
<b>Color</b>	Colorless	
<b>Odor</b>	aromatic	
<b>Odor Threshold</b>	No information available	
<b>Property</b>	<b>Values</b>	<b>Remarks</b>
<b>Melting Point/Range</b>	13 °C / 55.4 °F	<b>Method</b>
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	138 °C / 280.4 °F	
<b>Flash Point</b>	25 °C / 77 °F	<b>Method</b> - No information available
<b>Flammability (liquid)</b>	Flammable	On basis of test data
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	<b>Lower</b> 1.1 Vol% <b>Upper</b> 7 Vol%	
<b>Autoignition Temperature</b>	465 °C / 869 °F	
<b>Decomposition Temperature</b>	No data available	
<b>pH</b>	Not applicable	
<b>Viscosity</b>	0.648 mPa.s (20°C)	
<b>Water Solubility</b>	0.2 g/L (20°C)	practically insoluble
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>	<b>log Pow</b>	
<b>Component</b>	3.2	
p-Xylene	8 mbar @ 20 °C	
<b>Vapor Pressure</b>	0.866	
<b>Density / Specific Gravity</b>	Not applicable	Liquid
<b>Bulk Density</b>	3.7 (Air = 1.0)	(Air = 1.0)
<b>Vapor Density</b>	(liquid) Not applicable	
<b>Particle characteristics</b>		

**Other Information**

<b>Molecular Formula</b>	C8 H10
<b>Molecular Weight</b>	106.17
<b>Explosive Properties</b>	explosive air/vapour mixtures possible

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents, Strong acids, Strong bases
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrocarbons, Aldehydes
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

<b>Inhalation</b>	Harmful by inhalation.
<b>Ingestion</b>	Aspiration hazard if swallowed - can enter lungs and cause damage. Harmful if swallowed. Potential for aspiration if swallowed.
<b>Eyes</b>	Avoid contact with eyes. Irritating to eyes.
<b>Skin</b>	Harmful in contact with skin. Causes skin irritation. Avoid contact with skin. May cause irritation.

**Toxicology data for the components**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
p-Xylene	LD50 = 4029 mg/kg ( Rat )	LD50 = 12126 mg/kg ( Rabbit )	LC50 = 4740 ppm ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**  
**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
p-Xylene	106-42-3	Not listed				

**(g) reproductive toxicity;** No data available

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.  
**Developmental Effects** Developmental effects have occurred in experimental animals.  
**Teratogenicity** Teratogenic effects have occurred in experimental animals.

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** Category 1

**Other Adverse Effects** See actual entry in RTECS for complete information

**Symptoms / effects,both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Other Adverse Effects** See actual entry in RTECS for complete information.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains. The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Contains a substance which is: Toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
p-Xylene	EC50: = 3.2 mg/L, 72h static (Pseudokirchneriella subcapitata)	LC50: = 8.8 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 2.6 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 2.6 mg/L, 96h (Oncorhynchus mykiss) LC50: 7.2 - 9.9 mg/L, 96h static (Pimephales promelas)	EC50 = 5.7 mg/L 30 min	EC50: 3.55 - 6.31 mg/L, 48h Static (Daphnia magna)

**Persistence and Degradability** Insoluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment due its low water solubility. Will likely be mobile in the environment due to its volatility.

Component	log Pow
p-Xylene	3.2

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No	UN1307
Proper Shipping Name	XYLENES
Hazard Class	3
Packing Group	III

### TDG

UN-No	UN1307
Proper Shipping Name	XYLENES
Hazard Class	3
Packing Group	III

### IATA

UN-No	UN1307
Proper Shipping Name	XYLENES
Hazard Class	3
Packing Group	III

### IMDG/IMO

UN-No	UN1307
Proper Shipping Name	XYLENES
Hazard Class	3
Packing Group	III

## 15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
p-Xylene	106-42-3	X	ACTIVE	-

**Legend:**

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
p-Xylene	106-42-3	X	-	203-396-5	X	X	X	X	X	KE-35430

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds
p-Xylene	106-42-3	>95	1.0 %	-

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
p-Xylene	X	-	-	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
p-Xylene	X	-	-

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
p-Xylene	100 lb	-	100 lb

			45.4 kg
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**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know  
Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
p-Xylene	X	X	X	X	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland  
Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** Moderate risk, Grade 2

**Authorisation/Restrictions according to EU REACH**

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
p-Xylene	106-42-3	-	Use restricted. See entry 75. (see link for restriction details)	-

**REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
p-Xylene	106-42-3	Listed	Not applicable	Not applicable	Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluorooalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
p-Xylene	106-42-3	Not applicable	Not applicable	Not applicable	Not applicable

**16. Other Information**

<b>Prepared By</b>	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com
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<b>Revision Date</b>	20-Dec-2025
<b>Print Date</b>	20-Dec-2025
<b>Revision Summary</b>	Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**