

1 Identification of the substance/mixture and of the company/undertaking

- **Product name:** **m-Xylene**
- **Product identifier**
m-Xylene:
Cas No.: 108-38-3
EC-number: 203-576-3
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Intermediate
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Perstorp Singapore Pte Ltd
12, Sakra Road
Jurong Island
Singapore 627892

Perstorp Specialty Chemicals AB
SE-284 80 Perstorp, Sweden
Tel. +46 435 38000
Fax +46 435 37067
www.perstorp.com
- **Further information obtainable from:** productinfo@perstorp.com
- **Emergency telephone number:** (Int.) +46 8 337043 (Emergency Response Center, Sweden)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20/21: Harmful by inhalation and in contact with skin.



Xi; Irritant

R38: Irritating to skin.

R10: Flammable.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 1)

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
m-xylene
- **Hazard statements**
H226 Flammable liquid and vapour.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H304 May be fatal if swallowed and enters airways.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P243 Take precautionary measures against static discharge.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P331 Do NOT induce vomiting.
- **Hazard description:**
The substance is a flammable liquid and may form explosive air/vapour mixtures.

Inhalation:
May cause sore throat, headache, nausea, coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and as well transient central nervous system depression.

Skin contact:
Causes redness and swelling of the skin. Repeated contact with the skin may cause it to become dry and cracked.

Eye contact:
Causes severe irritation with flood of tears and pain and strong redness and swelling of the eye.

Ingestion:
Ingestion causes gastrointestinal distress and may cause toxic hepatitis. Vapours may reach the lungs and cause fatal chemical pneumonia.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** No.
- **vPvB:** No.

3 Composition/information on ingredients

- **Chemical characterization: Substances** Yes.

(Contd. on page 3)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 2)

· **Chemical components:**

CAS: 108-38-3 EINECS: 203-576-3	m-xylene ☒ Xn R20/21; ☒ Xi R38 R10 ☒ Flam. Liq. 3, H226; ☒ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	90%
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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:** First aid personnel should pay attention to their own safety.

· **After inhalation:**

Move to fresh air.

Keep patient calm.

Seek immediate medical attention.

If breathing is difficult, give oxygen if possible or assisted ventilation (do not use mouth to mouth).

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately flush skin with water and rinse skin with soap and water for at least 5-10 minutes. Use lukewarm water if possible. Remove contaminated clothing and shoes. Get medical attention if redness does not disappear.

· **After eye contact:**

Immediately flush eyes, also under eyelids, with water for at least 5-10 minutes. Use lukewarm water if possible. Get medical attention.

· **After swallowing:**

Do NOT induce vomiting. Rinse mouth with water and spit it out. Then drink 1 - 2 glasses of water or milk. Never given anything orally to an unconscious person. Get medical attention immediately. If vomiting does occur, have victim lean forward to reduce risk of aspiration.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture**

Vapour is heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

In case of fire or heating the pressure will increase which may lead the container to burst, with the risk of a subsequent explosion.

Cool endangered receptacles with water spray.

Do not allow run-off from fire fighting to enter drains or water courses – may cause explosion hazard in drains and may reignite on surface water.

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO₂)

Hydrocarbons

· **Advice for firefighters**

· **Protective equipment:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

· **Additional information** The product will float on water and can be reignited on surface water.

GB

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 3)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Switch off all sources of ignition. Ensure that no open flames exists in the affected area. No smoking.

Wear protective equipment. Keep unprotected persons away.

Shelter from vapours by keeping upwind.

Avoid inhalation of vapours and mist including direct contact with the product.

Ensure adequate ventilation.

Beware of accumulation of vapours in low areas or contained areas, where explosive concentrations may occur.

- **Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up:**

Minimize the area spreading and cover the drains.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Use explosion-proof apparatus / fittings and spark-proof tools.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** Use only in well ventilated areas.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Containers should be opened only under exhaust ventilation hood. Do not allow splash filling of bulk volumes. Do not use compressed air for filling, discharging or handling. Cleaning, inspection and maintenance of the internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Handle empty containers with care; vapour residue may be flammable. Do not pressurise, cut, weld, braze, solder, drill, or grind on containers.

Risk of formation of explosive vapour/air mixtures.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:** Prevent flames, sparks, welding or smoking in the storage.

- **Requirements to be met by storerooms and receptacles:**

Store receptacle in a well ventilated area.

Store in cool, dry place in tightly closed receptacles.

Vapour space above stored liquid may be flammable/explosive unless blanketed with inert gas.

Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:** Protect from heat and direct sunlight.

8 Exposure controls/personal protection

- **Control parameters**

Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 4)

· **Ingredients with limit values that require monitoring at the workplace:**

108-38-3 m-xylene

WEL (Great Britain)	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
IOELV (EU)	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin

· **DNELs**

108-38-3 m-xylene

Oral	DNEL long term syst.	12.5 mg/kg bw/d (general public)
Dermal	DNEL long term syst.	3182 mg/kg bw/d (workers) 1872 mg/kg bw/d (general public)
Inhalative	DNEL acute local eff	442 mg/m ³ (workers) 260 mg/m ³ (general public)
	DNEL acute systemic	442 mg/m ³ (workers) 260 mg/m ³ (general public)
	DNEL long term local	221 mg/m ³ (workers) 65.3 mg/m ³ (general public)
	DNEL long term syst.	221 mg/m ³ (workers) 65.3 mg/m ³ (general public)

· **PNECs**

108-38-3 m-xylene

PNEC STP	5 mg/l (-)
PNEC freshwater	0.25 mg/l (-)
PNEC intermittent	0.25 mg/l (-)
PNEC marine water	0.25 mg/l (-)
PNEC sediment (FW)	14.33 mg/kg dw (-)
PNEC sediment (MW)	14.33 mg/kg dw (-)

· **Additional information:**

Ensure that eyewash stations and safety showers are proximal to the work-station location.

· **Exposure controls**

Keep personal exposure levels below Derived No Effect Level (DNEL) by wearing personal protective equipment mentioned below.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Filter A/P2

· **Protection of hands:**



Protective gloves

PVA gloves
Solvent resistant gloves

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 5)

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes).

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Colour: Colourless

- **Odour:** Aromatic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: -48 °C

Boiling point/Boiling range: 139 °C

- **Flash point:** 25 °C

- **Flammability (solid, gaseous):** Not applicable

- **Ignition temperature:** 525 °C

- **Danger of explosion:** The product is not explosive. However, formation of explosive air-vapour mixtures are possible.

- **Explosion limits:**

Lower: 1.1 Vol %

Upper: 7.0 Vol %

- **Oxidizing properties** Not oxidizing.

- **Vapour pressure at 20 °C:** 8.1 hPa

- **Density at 20 °C:** 0.86 g/cm³

- **Solubility in / Miscibility with water:** Insoluble.

- **Partition coefficient (n-octanol/water) at 20 °C:** 3.2 log POW

- **Other information** Relative vapor density (air): 3,7

10 Stability and reactivity

- **Reactivity**

There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.

- **Chemical stability** The product is stable at normal conditions.

- **Possibility of hazardous reactions** Reacts with oxidizing agents.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 6)

- **Conditions to avoid** Keep away from heat and direct sunlight.
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:**
In case of fire, the following can be released:
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Hydrocarbons

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

Routes of exposure:

Exposure to xylene can occur via inhalation, ingestion, eye or skin contact, and, to a small extent, by absorption through the skin.

- **LD/LC50 values:**

108-38-3 m-xylene

Oral	LD50	6602 mg/kg (rat) (OECD 401)
Dermal	LD50	12126 mg/kg (rbt)
Inhalative	LC50/4h	6700 ppm (rat) (EU Method B.2)
	LC50/6h	23 mg/l (mouse)

- **Primary irritant effect:**

- **on the skin:** Slightly irritating.
- **on the eye:** Irritating effect.
- **Inhalation:** Irritating to respiratory system.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- **Sensitisation**

Not sensitising.

Xylene isomer mixtures have however been tested positive in Local Lymph Node Assay.

- **Repeated dose toxicity**

108-38-3 m-xylene

Inhalative	NOAEC Tox Repeat	1800 ppm (rat)
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- **Carcinogenicity:** -

- **Mutagenicity:**

The product is not considered to be mutagenic.

In vitro:

Not mutagenic in Bacterial Reverse Mutation Assay. (OECD 471)

Positive in single cell gel/comet assay in mammalian cells for detection of DNA damage.

In vivo:

Not mutagenic in in vivo Mammalian Erythrocyte Micronucleus Test. (OECD 474)

- **Reproductive toxicity:**

108-38-3 m-xylene

Inhalative	NOAEC Development	500 ppm (rat) (OECD 414)
	NOAEC Maternal Tox	500 ppm (rat) (OECD 414)
	NOAEC Teratogenicity	2000 ppm (rat) (OECD 414)

GB

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 7)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
Toxic to the aquatic organisms tested.

108-38-3 m-xylene

IC50/24h	4.7 mg/l (Daphnia magna) (OECD 202)
IC50/72h	4.9 mg/l (Pseudokirchnerella subcapitata) (OECD 201)
LC50/96h	8.4 mg/l (Oncorhynchus mykiss) (OECD 203)

- **Persistence and degradability**
The product is readily biodegradable.

108-38-3 m-xylene

BOD/ThOD 5d	80 % (-)
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- **Behaviour in environmental systems:**
- **Bioaccumulative potential**
Low potential for accumulation in organisms

108-38-3 m-xylene

BCF	1.37 (-)
log Pow	3.2 (-)

- **Mobility in soil**

108-38-3 m-xylene

Log Koc	2.73 (-)
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- **Results of PBT and vPvB assessment**
- **PBT:** No.
- **vPvB:** No.
- **Other adverse effects** The substance may contribute the formation of ground level ozone.

13 Disposal considerations

- **Waste treatment methods**
The product is classified as hazardous waste and must be disposed of as such.
Incinerate at a licensed installation.

- **European waste catalogue**

07 01 04*	other organic solvents, washing liquids and mother liquors
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- **Uncleaned packaging:**
Thoroughly emptied and clean packaging may be recycled.
Contaminated packaging materials must be disposed of in the same manner as the product.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Hazard Identification number:** 30
- **UN Number :** 1307
- **Packing group :** III
- **Hazard label :** 3

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

10.05.2011

Version: 1

Revision: 10.05.2011

Product name: m-Xylene

(Contd. of page 8)

- **Proper shipping name (Technical Name) :** XYLENES, solution
- **Limited quantities (LQ)** 5L
- **Tunnel restriction code :** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1307
- **Hazard label :** 3
- **Packing group:** III
- **EmS (Emergency schedule) :** F-E,S-D
- **Marine pollutant (environmentally hazardous mark) :** No
- **Proper shipping name (Technical Name) :** XYLENES, solution

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN Number :** 1307
- **Hazard label :** 3
- **Packing group:** III
- **Proper shipping name (Technical Name) :** XYLENES, solution

15 Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This Safety Data Sheet is not a Product Specification. It is based on our present knowledge and experience and it is intended to serve as a guide for safe handling of the product regarding to health and environmental aspects.

- **Relevant phrases**

- H226 Flammable liquid and vapour.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H332 Harmful if inhaled.
- R10 Flammable.
- R20/21 Harmful by inhalation and in contact with skin.
- R38 Irritating to skin.

- **Department issuing SDS:** Corporate EHSQ Perstorp Holding AB
- *** Data compared to the previous version altered.**

GB