

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Xylene

Version number: 2.1  
Issued: 2024-08-05  
Replaces SDS: 2023-09-20



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name**

Xylene

**CAS number**

1330-20-7

**EC number**

215-535-7

**Synonyms**

1,2 dimethylbenzene

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified uses**

Research and development.

**Not suitable for use in**

Not suitable for human consumption or veterinary purposes.

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

**Supplier**

Molekula Group

Address

Molekula Ltd,  
Lingfield Way, Darlington,  
County Durham,  
DL1 4XX  
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

**Contact person**

Kevin Banks

**Email**

+44 (0) 7769276927

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## 1.4. Emergency telephone number

### Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

#### Classification

Hazardous to the aquatic environment — Chronic hazard category 3  
Skin irritation, hazard category 2  
Specific Target Organ Toxicity — Repeated exposure, hazard category 2  
Acute toxicity, dermal, hazard category 4  
Acute toxicity, inhalation, hazard category 4  
Aspiration hazard, hazard category 1  
Flammable liquids, hazard category 3

#### Hazard statements

H226, H304, H312, H315, H332, H373, H412

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H226 Flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H332 Harmful if inhaled.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

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## **Precautionary statements**

P202 Do not handle until all safety precautions have been read and understood.  
 P233 Keep container tightly closed.  
 P260 Do not breathe dust/fumes/gas/mist/vapours/spray.  
 P262 Do not get in eyes, on skin, or on clothing.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
 P302 + P352 IF ON SKIN: Wash with plenty of water/.  
 P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P314 Get medical advice/attention if you feel unwell.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P403 Store in a well-ventilated place.  
 P405 Store locked up.  
 P501 Dispose of contents/container to local regulations.

## **2.3. Other hazards**

No data available

## **SECTION 3: Composition/information on ingredients**

### **3.2. Mixtures**

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
Xylene	1330-20-7 215-535-7 - -	100%	Flam. Liq. 3, Asp. Tox. 1, Acute Tox. 4 - dermal, Skin Irrit. 2, Acute Tox. 4 - inhalation, STOT RE 2, Aquatic Chronic 3	H226, H304, H312, H315, H332, H373, H412 - -	-

### **Molecular weight**

106.17

### **Substance additional information**

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel.

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: Seek medical attention and bring these instructions.

#### Skin contact

IF ON SKIN: Wash with plenty of soap and water. Continue to rinse for at least 15 minutes. Get medical advice/attention if you feel unwell.

#### Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

#### Ingestion

Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

#### Information for doctors

No data available.

### 4.2. Most important symptoms and effects, both acute and delayed

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

#### Inhalation

Single exposure may cause the following adverse effects: Upper respiratory irritation. Difficulty in breathing.

#### Skin contact

Single exposure may cause the following adverse effects: Severe skin irritation.

#### Eye contact

May cause temporary eye irritation.

#### Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. Nausea, vomiting.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No special treatment requirement.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

#### Unsuitable extinguishing media

No specific fire fighting procedure given.

### 5.2. Special hazards arising from the substance or mixture

Specific hazards: FLAMMABLE. Containers can burst violently when heated, due to excess pressure build-up. Vapours may form explosive mixture with air at room temperature. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Combustible. Vapours are heavier than air and may travel along the floor and in the bottom of containers.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours and spray mist and contact with skin and eyes. For personal protection, see section 8. Provide adequate ventilation. Remove sources of ignition. Beware of the explosion danger. Take action to prevent static discharges.

### 6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Risk of explosion.

### 6.3. Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers. Remove sources of ignition. Beware of the explosion danger. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

For precautions see section 2.2. Work under hood Do not inhale substance/mixture Avoid generation of vapours/aerosols.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharges.

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## General hygiene

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.

Do not eat, drink or smoke when using this product. Wash skin thoroughly after handling.

## 7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature. Store in a dry place. Store in a closed container.

## 7.3. Specific end use(s)

No specific usage precautions noted.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits

TWA 50ppm 221 mg/m<sup>3</sup> Europe

STEL 100ppm 442mg/m<sup>3</sup> Europe

TWA 50ppm 220mg/m<sup>3</sup> UK. EH40. WEL = Workplace Exposure Limit.

STEL 100ppm 441mg/m<sup>3</sup> UK. EH40. WEL = Workplace Exposure Limit.

#### DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
Xylene (1330-20-7/215-535-7)	DNEL	Acute (short term) Inhalation	289 mg/m <sup>3</sup>	Workers	Systemic
Xylene (1330-20-7/215-535-7)	DNEL	Chronic (long term) Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic
Xylene (1330-20-7/215-535-7)	DNEL	Acute (short term) Inhalation	174 mg/m <sup>3</sup>	Consumers	Systemic
Xylene (1330-20-7/215-535-7)	DNEL	Chronic (long term) Inhalation	14.8 mg/m <sup>3</sup>	Consumers	Systemic

#### PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Xylene (1330-20-7/215-535-7)	PNEC	Freshwater	0.327 mg/l
Xylene (1330-20-7/215-535-7)	PNEC	Marine water	0.327 mg/l
Xylene (1330-20-7/215-535-7)	PNEC	Soil	2.31 mg/kg

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Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Xylene (1330-20-7/215-535-7)	PNEC	Sewage Treatment Plant	6.58 mg/l
Xylene (1330-20-7/215-535-7)	PNEC	Sediment (marine water)	12.46 mg/kg
Xylene (1330-20-7/215-535-7)	PNEC	Sediment (freshwater)	12.46 mg/kg
Xylene (1330-20-7/215-535-7)	PNEC	Intermittent releases	0.327 mg/l

## 8.2. Exposure controls

### Personal Protective Equipment Symbols



### Eye / face protection

Wear eye protection.

### Hand protection

Wear protective gloves.

Recommended gloves: Viton rubber (fluor rubber).

Glove Thickness: 0.4mm

Breakthrough time: 8 hours

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

Wash contaminated skin thoroughly after handling.

### Other skin protection

Wash skin thoroughly after handling.

### Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

### Environmental exposure controls

Avoid discharge into drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

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## Colour

Colourless.

## Odour

Aromatic.

## Melting point / freezing point

-39.3 °C

## Boiling point or initial boiling point and boiling range

136 - 140 °C

## Flammability

No data available

## Lower and upper explosion limit

1.1 - 7 %

## Flash point

23 °C

## Auto-ignition temperature

488 °C

## Decomposition temperature

138.3 - 141.4 °C

## pH

No data available

## Kinematic viscosity

No data available

## Solubility

No data available

## Partition coefficient n-octanol/water

No data available

## Vapour pressure

8.8 - 11.9 hPa

## Density and/or relative density

0.84 g/cm<sup>3</sup>

## Relative vapour density

No data available

## Particle characteristics

No data available

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## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2. Chemical stability

Stable under normal temperature conditions. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

There are no known conditions that are likely to result in a hazardous situation.

### 10.4. Conditions to avoid

Heat, sparks, flames.

### 10.5. Incompatible materials

Strong oxidising agents. Strong acids. Strong bases

### 10.6. Hazardous decomposition products

See section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals
Xylene 1330-20-7 / 215-535-7	LD50	3523 mg/kg	Oral	-	Rat
Xylene 1330-20-7 / 215-535-7	LC50	29.09 mg/l	Inhalation.	4 hours	Rat
Xylene 1330-20-7 / 215-535-7	LD50	>1700 mg/kg	Dermal	-	Rabbit

#### Skin corrosion/irritation

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Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
Xylene 1330-20-7 / 215-535-7	Moderately Irritating.	24 hours	Rabbit

### Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
Xylene 1330-20-7 / 215-535-7	Causes serious eye irritation.	24 hours	Rabbit

### Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
Xylene 1330-20-7 / 215-535-7	Negative.	Mouse	Local Lymph Node Assay

### Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result	Metabolic activation / Exposure	Species	Method / Guideline
Xylene 1330-20-7 / 215-535-7	Negative.	with and without meta- bolic activation	Chinese Hamster cells: Ovary	Mutagenicity (mammal cell test): Chromosome aberration:
Xylene 1330-20-7 / 215-535-7	Negative.	with and without meta- bolic activation	Salmonella typhimurium	Ames test
Xylene 1330-20-7 / 215-535-7	Negative.	with and without meta- bolic activation	Chinese Hamster cells: Ovary	sister chromatid exchange assay
Xylene 1330-20-7 / 215-535-7	Negative.	-	Mouse	dominant lethal test

### Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2. Information on other hazards

No data available

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## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Xylene 1330-20-7 / 215-535-7	LC50	2.60 mg/l	96 hours	Onchorhynchus mykiss (Rainbow trout)

#### Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Xylene 1330-20-7 / 215-535-7	EC50	4.36 mg/l	73 hours	Pseudokirchneriella sub-capitata

#### Chronical toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Xylene 1330-20-7 / 215-535-7	NOEC	0.96 mg/l	7 days	Ceriodaphnia dubia (water flea)
Xylene 1330-20-7 / 215-535-7	NOEC	1.3 mg/l	56 days	Onchorhynchus mykiss (Rainbow trout)

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Endocrine disrupting properties

No data available

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## 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14: Transport information

### 14.1. UN number

1307

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

XYLENES

#### IMDG proper shipping name

XYLENES

#### IATA proper shipping name

Xylenes

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## 14.3. Transport hazard class(es)

### Label

ADR/RID/ADN



3

IMDG



3

IATA



3

### ADR / RID Class

3

### ADR / RID Classification code

F1

### ADR / RID hazard identification number

30

### IMDG Class

3

### IATA Class

3

### ADN Class

3

### ADN Class Code

F1

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## 14.4. Packing group

ADR / RID / ADN: III

IMDG: III

IATA: III

## 14.5. Environmental hazards

Not applicable

## 14.6. Special precautions for user

### Special precautions for user

Tunnel restriction code: D/E

Transport category: 3

### IMDG EmS

F-E, S-D

## 14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC03

## SECTION 15: Regulatory information

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

#### EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National regulations

Directive: 2012/18/EU FLAMMABLE LIQUIDS

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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## SECTION 16: Other information

### Phrase meaning

Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3

Skin Irrit. 2 - Skin irritation, hazard category 2

STOT RE 2 - Specific Target Organ Toxicity — Repeated exposure, hazard category 2

Acute Tox. 4 - dermal - Acute toxicity, dermal, hazard category 4

Acute Tox. 4 - inhalation - Acute toxicity, inhalation, hazard category 4

Asp. Tox. 1 - Aspiration hazard, hazard category 1

Flam. Liq. 3 - Flammable liquids, hazard category 3

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.