

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
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1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No.: 108681

Product name: Xylene GR for analysis ACS,ISO,Reag. Ph Eur

Use of the substance/preparation

Reagent for analysis
Chemical production
Pharmaceutical production and analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0

Emergency telephone No.: Please contact the regional Merck representation in your country.

2. Composition/information on ingredients

Synonyms

Dimethylbenzene

CAS-No.: 1330-20-7

EC-Index-No.: 601-022-00-9

M: 106.17 g/mol

EC-No.: 215-535-7

Formula Hill: C₈H₁₀

Chemical formula: C₆H₄(CH₃)₂

3. Hazards identification

Flammable. Harmful by inhalation and in contact with skin. Irritating to skin.

4. First aid measures

After inhalation: fresh air.

If breathing stops: mouth-to-mouth respiration or mechanical ventilation. Oxygen mask if necessary! Immediately call in physician.

After skin contact: wash off with plenty of water. Remove contaminated clothing. Call in physician.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophtalmologist if necessary.

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free.

Immediately call in physician. Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

No alcohol.

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5. Fire-fighting measures

Suitable extinguishing media:
CO₂, foam, powder.

Special risks:
Combustible. Vapours heavier than air.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment for fire fighting:
Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:
Do not allow to enter sewerage system; risk of explosion!

Procedures for cleaning / absorption:
Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

Notes for prevention of fire and explosion:
Keep away from sources of ignition. Take measures to prevent electrostatic charging.

Storage:

Tightly closed in a well-ventilated place, away from sources of ignition and heat. Storage temperature: no restrictions.

8. Exposure controls/personal protection

Specific control parameter

EC	
Name	Xylenes
Value	50 ml/m ³
	221 mg/m ³
Short term (<15 min.)	100 ml/m ³
	442 mg/m ³
Skin resorption	Risk of skin absorption

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Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated. Filter A (acc. to DIN 3181) for vapours of organic compounds.

Eye protection: required

Hand protection:

In full contact:

Glove material: viton
Layer thickness: 0.70 mm
Breakthrough time: > 480 Min.

In splash contact:

Glove material: nitrile rubber
Layer thickness: 0.40 mm
Breakthrough time: > 30 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 890 Vitoject® (full contact), 730 Camatril® -Velours (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment: Flame-proof protective clothing.

Industrial hygiene:
Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	liquid		
Colour:	colourless		
Odour:	aromatic		
pH value		not applicable	
Viscosity dynamic	(20 °C)	~ 0.6	mPa*s
Melting point		> -34	°C
Boiling point		137-143	°C
Ignition temperature		~ 465	°C (DIN 51794)
Flash point		25	°C c.c.
Explosion limits	lower	1.0	Vol%
	upper	7.0	Vol%
Vapour pressure	(20 °C)	10	hPa
Relative vapour density		3.7	
Density	(20 °C)	0.86	g/cm ³

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Solubility in water	(20 °C)	0.2	g/l
log Pow		3.12	(experimental) (Lit.)

10. Stability and reactivity

Conditions to be avoided

Heating.

Substances to be avoided

Violent reactions possible with: strong oxidizing agents, conc. sulfuric acid, sulfur.

Risk of explosion with: nitric acid, uranium hexafluoride.

Hazardous decomposition products

no information available

Further information

incompatible with light metals, various plastics, rubber.

explosible with air in a vaporous/gaseous state when heated

11. Toxicological information

Acute toxicity

LC₅₀ (inhalation, rat): 28 mg/l /4 h (IUCLID).

LD₅₀ (dermal, rabbit): >4350 mg/kg (IUCLID).

LD₅₀ (oral, rat): 2840 mg/kg (External MSDS).

Specific symptoms in animal studies:

Eye irritation test (rabbit): Slight irritations (IUCLID).

Skin irritation test (rabbit): Irritations (IUCLID).

The literature data available to us do not conform with the labelling prescribed by the EC. The EC has dossiers which have not been published.

Subacute to chronic toxicity

No indication of carcinogenic activity. (IUCLID)

Mutagenicity (mammal cell test): micronucleus negative. (IUCLID)

Bacterial mutagenicity: Ames test: negative. (in vitro) (IUCLID)

Mutagenicity (mammal cell test): chromosome aberration negative. (in vitro) (National Toxicology Program)

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Further toxicological information

After inhalation of vapours: Inhalation may lead to the formation of oedemas in the respiratory tract.

After skin contact: Irritations. Danger of skin absorption. Degreasing effect on the skin, possibly followed by secondary inflammation. After long-term exposure to the chemical: dermatitis.

After eye contact: Slight irritations.

After swallowing: gastrointestinal symptoms. Risk of aspiration upon vomiting.

After absorption of toxic quantities:

Systemic effects: headache, Drowsiness, dizziness, euphoria, excitation, spasms, in certain circumstances narcosis. Effect potentiated by: ethanol

Damage of: liver, kidneys, central nervous system.

Further data

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Biologic degradation:

Biodegradable.

Behavior in environmental compartments:

Distribution: log Pow: 3.12 (experimental) (Lit.).

An appreciable bioaccumulation potential is to be expected (log Po/w >3).

Henry constant: 772 Pa·m³/mol (experimental) (Lit.).

Distribution preferentially in air.

Ecotoxic effects:

Biological effects:

Fish toxicity: *Onchorhynchus mykiss* LC₅₀: 8.2 mg/l /96 h (ECOTOX Database).

Daphnia toxicity: *Daphnia magna* EC₅₀: 75.5 mg/l /24 h (ECOTOX Database).

The literature data available to us do not conform with the labelling prescribed by the EC. The EC has dossiers which have not been published.

Further ecologic data:

Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

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14. Transport information

Road & Rail ADR, RID
UN 1307 XYLENE, 3, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 1307 XYLENES, 3, III
Ems F-E S-D

Air CAO, PAX
UN 1307 XYLENES, 3, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xn	Harmful
R-phrases:	10-20/21-38	Flammable. Harmful by inhalation and in contact with skin. Irritating to skin.
S-phrases:	25	Avoid contact with eyes.
EC-No.:	215-535-7	EC label

Reduced labelling (1999/45/EC, Art. 10, 4)

Symbol:	Xn	Harmful
R-phrases:	10-20/21	Flammable. Harmful by inhalation and in contact with skin.
S-phrases:	---	

16. Other information

Reason for alteration

Chapter 8: specific control parameter.
Chapter 11: toxicological information.
Chapter 12: ecological information.

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.