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

1.1 Product identifier

Product Name:	Xylene (Mixed)
Product Description:	V9001a-C9-Xylene (Mixed)
Trade name:	C9
Product Code:	C9
CAS No.:	1330-20-7
EC No.:	215-535-7
Synonyms:	Dimethylbenzene, Benzene,dimethyl-;

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

Identified use(s):	Industrial use only.

1.3 Details of the supplier of the Safety Data Sheet

Company Identification:	Vitol SA Boulevard du Pont d'Arve 28 P.O. Box 384 1211 Geneva 4 Switzerland
Telephone:	+31 10 498 7200
Fax:	+31 10 452 9545
E-Mail (competent person):	xreach@vitol.com

1.4 Emergency telephone number

Emergency Phone No. (24 h):	+44 (0) 1235 239 670 (24 hours, 7 days)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to Regulation (EC) No. 1272/2008 (CLP)

Flam. Liq. 3; H226
Asp. Tox. 1; H304 (Self classification)
Acute Tox. 4; H312
Skin Irrit. 2; H315
Eye Irrit. 2; H319 (Self classification)
Acute Tox. 4; H332
STOT SE 3; H335 (Self classification)
STOT RE 2; H373 (Self classification)

According to Directive 67/548/EEC & Directive 1999/45/EC

Xn; R20/21 - R48/20 - R65
Xi; R36/37/38
R10

2.2.1 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Hazard pictogram(s):

Signal word(s): Danger.

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	Hazard statement(s):	H226: Flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H312: Harmful in contact with skin. H315: Causes skin irritation. H319: Causes serious eye irritation. H332: Harmful if inhaled. H335: May cause respiratory irritation. H373: May cause damage to organs through prolonged or repeated exposure: Ototoxicity.
	Precautionary statement(s):	P210: Keep away from heat, sparks, open flame, hot surfaces - No smoking. P243: Take precautionary measures against static discharge. P260: Do not breathe mist/vapours/spray. P280: Wear protective gloves/protective clothing/eye protection/face protection. P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. P331: Do NOT induce vomiting.
2.2.2	**Label elements**	According to Directive 67/548/EEC & Directive 1999/45/EC
	Hazard pictogram(s):	
	Hazard Symbol:	Harmful.
	Risk Phrases:	R10: Flammable. R20/21: Harmful by inhalation and in contact with skin. R36/37/38: Irritating to eyes, respiratory system and skin. R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation. R65: Harmful: may cause lung damage if swallowed.
	Safety Phrases:	S2: Keep out of the reach of children. S25: Avoid contact with eyes.
2.3	**Other hazards**	Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

EC Classification No. 1272/2008

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	Hazard symbol(s) and hazard statement(s)
Xylene (mixture of isomers)	> 99.0	1330-20-7	215-535-7	Flam. Liq. 3; H226 Asp. Tox. 1; H304 (Self classification) Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 (Self classification) Acute Tox. 4; H332 STOT SE 3; H335 (Self classification) STOT RE 2; H373 (Self classification)

EC Classification No. 67/548/EC

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	Risk Phrases and Safety Phrases
Xylene (mixture of isomers)	> 99.0	1330-20-7	215-535-7	Xn; R20/21 - R48/20 - R65 Xi; R36/37/38 R10

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Obtain immediate medical attention.Remove patient from exposure, keep warm and at rest.

Skin Contact: Obtain immediate medical attention. Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. Contaminated clothing should be thoroughly cleaned.

Eye Contact: Obtain immediate medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.

Ingestion: Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Aspiration hazard. Irritating to eyes and skin.

4.3 Indication of the immediate medical attention and special treatment needed

Have available eyewash bottle with clean water. If breathing is laboured, oxygen should be administered by qualified personnel. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media: Foam, CO2 or dry powder.

Unsuitable Extinguishing Media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces.

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May give off toxic fumes in a fire. Carbon monoxide, Carbon dioxide.

5.3 Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep fire exposed containers cool by spraying with water.

Flash Point (°C): 27-32
Flammable Limits (Lower) (%v/v): 0.8
Flammable Limits (Upper) (%v/v): 7.0
Auto Ignition Temperature (°C): 432-528

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Eliminate sources of ignition. Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces. Ensure adequate ventilation. Use non-sparking hand tools and explosion proof electrical equipment. Take precautionary measures against static discharges.

Avoid inhalation of vapours. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. (See Section: 8). Contaminated clothing should be thoroughly cleaned.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material. Sweep up carefully with non-sparking tools. Transfer to a container for disposal. Wash spill area with soapy water. Contaminated adsorbent must be removed in sealed, plastic lined drums and disposed of via an authorised waste disposal contractor.

6.4 Reference to other sections

Personal Protection: See Section: 8.

Other advice

Caution - spillages may be slippery.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Eliminate sources of ignition. Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces. Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded. Use non-sparking hand tools and explosion proof electrical equipment. Take precautionary measures against static discharges.

Avoid inhalation of vapours. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. (See Section: 8).

Do not eat, drink or smoke at the work place. Wash hands and exposed skin after use. Contaminated clothing should be thoroughly cleaned.

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7.2 Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Keep from direct sunlight. Keep away from frost. Keep only in the original container in a cool, well-ventilated place.

7.3 Specific end use(s)

Industrial use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

EH40 – UK Occupational Exposure Limits

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
Xylene (mixture of isomers)	1330-20-7	50	220	100	441	Sk, BMGV

Sk - Can be absorbed through skin.
BMGV: Biological monitoring guidance value (UK HSE EH40)

France: 50 ppm, 221 mg/m^3 (VME) ; 100 ppm, 442 mg/m^3 (VLCT, ou VLE)
Spain : 50 ppm, 221 mg/m^3 (VLA-ED) ; 100 ppm, 442 mg/m^3 (VLA-EC) – VLB, VLI
Germany: 1.5 mg/l (BGW)

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded.

8.2.2 Personal Protection

Eye/face protection

Goggles giving complete protection to eyes. (EN 166)

Skin protection

Protective gloves. (EN 374)

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. (BS EN 14387:2004+A1)

Other:

Apron or other light protective clothing, boots and plastic or rubber gloves.

8.2.3 Environmental Exposure Controls

Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid.
Colour:	Colourless
Odour:	Aromatic.

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	Melting Point (°C) / Freezing Point (°C):	-94.96 – 13.20
	Boiling Point (°C):	136.2 – 144.5
	Flash Point (°C):	27 - 32
	Flammable Limits (Lower) (%v/v):	0.8
	Flammable Limits (Upper) (%v/v):	7.0
	Vapour Pressure (Pascal):	650 - 944
	Vapour Density (Air=1):	3.7
	Specific Gravity:	0.86 - 0.88 (@ 25°C)
	Solubility (Water):	146 – 190.7 mg/l (@ 25°C)
	Partition Coefficient: (n-Octanol/water):	3.12 – 3.20
	Auto Ignition Temperature (°C):	432-528
	Decomposition Temperature (°C):	Not applicable.
	Dynamic viscosity:	0.581 – 0.76 mPa/s (@ 25°C)
	Explosive Properties:	Vapour may create explosive atmosphere.
	Oxidising Properties:	Not oxidising.
	Surface tension;	28.0 – 29.8 mN/m (@ 25°C)
	Conductivity:	0.1 pS/m
9.2	**Other information**	
	Soluble in:	Alcohols. Ether.

10. STABILITY AND REACTIVITY

10.1	**Reactivity**	Reacts with - Strong oxidising agents.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	No information available.
10.4	**Conditions to avoid**	Keep away from heat, sources of ignition and direct sunlight.
10.5	**Incompatible materials**	Oxidizing agents.
10.6	**Hazardous Decomposition Product(s)**	May give off toxic fumes in a fire. Carbon monoxide, Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Ingestion:	LD_{50} (oral/rat): 3,525 mg/kg
Inhalation:	LC_{50} (inhalation/rat): 6,350 mg/l/4 h
Skin Contact:	LD_{50} (dermal/rabbit): 12,126 mg/kg
Eye Contact:	No information available.
Skin corrosion/irritation:	Irritating to skin.
Serious eye damage/irritation:	Moderate irritant.
Respiratory or skin sensitization:	Negative.
Mutagenicity:	There is no evidence of mutagenic potential.
Carcinogenicity:	No evidence of carcinogenicity in man.
Reproductive toxicity:	Negative.
STOT - single exposure:	The vapour may have narcotic effect. May cause damage to organs through prolonged or repeated exposure: Ototoxicity.
Aspiration hazard:	Risk of aspiration. Aspiration of liquid may cause pulmonary oedema.
Other information:	No information available.

12. ECOLOGICAL INFORMATION

12.1	**Toxicity**	LC_{50} (fish): 2.6 mg/l/96 h EC_{50} (Daphnia magna): 1 mg/l/48 h WGK: 2.
12.2	**Persistence and degradability**	Readily biodegradable. The product is unlikely to persist in the

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		environment.
12.3	**Bioaccumulative potential**	The product has low potential for bioaccumulation.
12.4	**Mobility in soil**	Bioconcentration factor (BCF) :25.9
12.5	**Results of PBT and VPVB assessment**	half-life > 40 - Fresh water half-life > 40 - Soil
12.6	**Other adverse effects**	No information available.

13. DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Do not empty into drains; dispose of this material and its container in a safe way. To be disposed of as hazardous waste. Disposal should be in accordance with local, state or national legislation.

14. TRANSPORT INFORMATION

14.1	**UN number**	1307
14.2	**Proper Shipping Name**	XYLENES
14.3	**Transport hazard class(es)**	3
14.4	**Packing Group**	III
14.5	**Environmental hazards**	Not classified as a Marine Pollutant.
14.6	**Special precautions for user**	Flammable. Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces.
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Pollution Category: A Ship Type: IBC03

15. REGULATORY INFORMATION

According to Regulation (EC) No. 1272/2008 (CLP)

Hazard pictogram(s):

Signal word(s): Danger.

Hazard statement(s):

H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H373: May cause damage to organs through prolonged or repeated exposure: Ototoxicity.

Precautionary statement(s):

P210: Keep away from heat, sparks, open flame, hot surfaces - No smoking.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P301 + P310: IF SWALLOWED: Immediately call a POISON

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CENTRE or doctor/physician.
P331: Do NOT induce vomiting.

According to Directive 67/548/EEC & Directive 1999/45/EC

Hazard pictogram(s):

Hazard Symbol: Harmful.

Risk Phrases:
R10: Flammable.
R20/21: Harmful by inhalation and in contact with skin.
R36/37/38: Irritating to eyes, respiratory system and skin.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65: Harmful: may cause lung damage if swallowed.

Safety Phrases:
S2: Keep out of the reach of children.
S25: Avoid contact with eyes.

16. OTHER INFORMATION

Full text of Hazard statements and Risk phrases for pure substances listed in section 3.

Hazard Symbol:
H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
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Risk Phrases:
R10: Flammable.
R20/21: Harmful by inhalation and in contact with skin.
R36/37/38: Irritating to eyes, respiratory system and skin.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65: Harmful: may cause lung damage if swallowed.

The following sections contain revisions or new statements: 1-16.

Abbreviations:
CAS = Chemical Abstracts Service;
CNS = Central Nervous System;
EINECS = European Inventory of Existing Commercial Chemical Substances;
EC50 = Effective Concentration 50%;
IARC = International Agency for Research on Cancer;
IC50 = Inhibitory Concentration 50%;
LC50 = Lethal Concentration 50%;
LD50 = Lethal Dose 50%;
LTEL = Long Term Exposure Limit;

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STEL = Short Term Exposure Limit;
TWA = Time Weighted Average;
EH40 = UK Occupational Exposure Limits
VLA-ED = Exposure limit value- Daily exposure (Valor Límite Ambiental-Exposición Diaria)
VLB = Biological Limit Values (Valores Límite Biológicos)
VLI= Indicative limit values
BGW= The biological limit

References:

IUCLID Chemical Data Sheets, IUCLID Export Files, OECD-IUCLID Export Files, EUSES Export Files,

European risk assessment report, Xylene (Mixed) CAS No. 1330-20-7, EINECS No. 215-535-7,

Litton Bionetics (1978a). Mutagenicity evaluation of xylene. Testing laboratory: Litton Bionetics Inc., 5516. Nicholson Lane, Kensington, Maryland 20005, USA. Report no.: API HESD Res Publ: 26-60018. Owner company: American Petroleum Institute, 2101 L Street, NW, Washington, DC 20037, USA. Report date: 1978-01-31.

Litton Bionetics (1978b). Teratology study in rats: Xylene. Testing laboratory: Litton Bionetics Inc., 5516. Nicholson Lane, Kensington, Maryland 20795, USA. Report no.: API HESD Res Publ: 26-60013. Owner company: American Petroleum Institute, 2101 L Street, NW, Washington, DC 20037, USA. Study number: LBI Project No. 20698-5. Report date: 1978-04-24.

NTP (1986). Toxicology and carcinogenesis studies of xylenes (mixed) (60% m-xylene, 13% p-xylene, 9% o-xylene, and 17% ethylbenzene) (CAS NO. 1330-20-7) in F344 rats and B6C3FI mice (gavage studies). U. S. Department of Health and Human Services, Public Health Service, National Institutes of Health. Testing laboratory: Battelle Columbus Laboratories. Report no.: NTP TR 327.

Bio/dynamics (1983). Parental and foetal reproduction inhalation toxicity study in rats with mixed xylenes. Testing laboratory: Bio/dynamics Inc., Mettlers Road, East Millstone, New Jersey 08773, USA. Owner company: American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005, USA. Study number: Project No. 80-2520.
Report date: 1983-08-23.

The EU RAR for ethylbenzene (EU, 2008) concludes that the substance is readily biodegradable. CITI (1992) also report that ethylbenzene meets the criteria for inherent biodegradability.

Galassi et al. (1988). Approaches to modelling toxic responses of aquatic organisms to aromatic hydrocarbons. Ecotoxicology and Environmental Safety 16, 158-169.

NTP, 1986; Hine & Zuidema, 1970; Wolf et al., 1956; Smyth et al., 1962).

Smyth HF, Carpenter CP, Weil CS, Pozzani MS and Streigel JA (1962)

Disclaimer:

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