

Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

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SECTION 1: Identification

Product identifier

Trade name/designation:	Xylene ACS
Product No.:	BDH2000
Synonyms:	no data available
CAS No.:	not applicable
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Supplier

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
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Manufacturer

VWR International Co.

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 Postal code/city Lachine, Quebec, H8R 1A3

Emergency telephone

Telephone +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA)

Preparation Information

VWR International - Data Compliance

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 3	H226
Carcinogenicity, category 2	H351
Specific target organ toxicity (repeated exposure), category 2	H373
Acute toxicity, category 4, dermal and inhalation	H312+H332
Aspiration hazard, category 1	H304
Eye irritation, category 2	H319
Skin irritation, category 2	H315

2.2 Label elements

Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard pictograms



Signal word: Danger

Hazard statements	
H226	Flammable liquid and vapor.
H351	Suspected of causing cancer.
H373	May cause damage to organs.
H312+H332	Harmful in contact with skin or if inhaled.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

Precautionary statements	
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.
P403+P235	Store in a well-ventilated place. Keep cool.

Hazards not otherwise classified (HNOC)
none/none

SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Hazardous ingredients Classification according to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Substance name	Concentration	Product identifier	Hazard classes and hazard categories
Xylene (mixture of isomers)	60 - 90%	CAS No.: 1330-20-7	Flam. Liq. 3 - H226 Acute Tox. 4 - H312+H332 Skin Irrit. 2 - H315
Ethylbenzene	10 - 30%	CAS No.: 100-41-4	Flam. Liq. 2 - H225 Acute Tox. 4 - H332
Toluene	< 1%	CAS No.: 108-88-3	Flam. Liq. 2 - H225 Repr. 2 - H361d STOT RE 2 - H373 Asp. Tox. 1 - H304 Skin Irrit. 2 - H315 STOT SE 3 - H336

SECTION 4: First aid measures

4.1 General information

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

4.5 Information to physician

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray
ABC-powder
Carbon dioxide (CO₂)
Nitrogen

Extinguishing media which must not be used for safety reasons

no restriction

5.2 Specific hazards arising from the chemical

In case of fire may be liberated:
Pyrolysis products, toxic

5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.
Protective equipment and precautions for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.
Do not inhale explosion and combustion gases.
Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.
Use water spray/stream to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Use personal protection equipment. Special danger of slipping by leaking/spilling product. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated objects and areas thoroughly observing environmental regulations. Collect in closed and suitable containers for disposal.

6.4 Additional information

Clear spills immediately.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible: Inhalation skin contact Eye contact Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: no data available

Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Xylene (mixture of isomers)	NIOSH	US	LTV	435 mg/m ³ - 100 ppm
Xylene (mixture of isomers)	NIOSH	US	STV	655 mg/m ³ (1) - 150 ppm (1)
Xylene (mixture of isomers)	OSHA	US	LTV	435 mg/m ³ - 100 ppm
Ethylbenzene	NIOSH	US	LTV	435 mg/m ³ - 100 ppm
Ethylbenzene	NIOSH	US	STV	545 mg/m ³ (1) - 125 ppm (1)
Ethylbenzene	OSHA	US	LTV	435 mg/m ³ - 100 ppm
Toluene	NIOSH	US	LTV	375 mg/m ³ - 100 ppm
Toluene	NIOSH	US	STV	560 mg/m ³ (1) - 150 ppm (1)
Toluene	OSHA	US	LTV	200 ppm
Toluene	OSHA	US	STV	300 ppm

8.2 Engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odour:	no data available
(c) Odour threshold:	no data available

Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	138-142 °C
(g) Flash point:	27 °C (closed cup)
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Flammable liquid and vapor.
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapour pressure:	0.9 kPa (20 °C)
(l) Vapour density:	3.7
(m) Relative density:	0.87 g/cm ³ (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	no data available
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	432 °C
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

9.2 Other information

Bulk density:	not applicable
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

10.7 Additional information

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity:

Xylene (mixture of isomers) - LD50: > 2840 mg/kg - Rat - (Merck KGaA)

Ethylbenzene - LD50: > 3500 mg/kg - Rat - (IUCLID)

Toluene - LD50: > 636 mg/kg - Rat - (IUCLID)

Acute dermal toxicity:

Xylene (mixture of isomers) - LD50: < 4350 mg/kg - Rabbit - (IUCLID)

Ethylbenzene - LD50: > 15354 mg/kg - Rabbit - (IUCLID)

Toluene - LD50: > 12124 mg/kg - Rabbit - (IUCLID)

Acute inhalation toxicity:

Xylene (mixture of isomers) - LC50: 29,08 mg/L - Rat - (Japan GHS Basis for Classification Data)

Ethylbenzene - LC50: 17,2 mg/L - Rat - (IUCLID)

Toluene - LC50: 12,5 mg/L - Rat - (Japan GHS Basis for Classification Data)

Irritant and corrosive effects

Primary irritation to the skin:
Causes skin irritation.

Irritation to eyes:
Causes serious eye irritation.

Irritation to respiratory tract:
not applicable

Respiratory or skin sensitization

In case of skin contact: not sensitising
After inhalation: not sensitising

STOT-single exposure

not applicable

STOT-repeated exposure

May cause damage to organs.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

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

no data available	ACGIH	IARC	NTP	OSHA

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

May be fatal if swallowed and enters airways.

Other adverse effects

no data available

Additional information

no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:

Xylene (mixture of isomers) - LC50: 15.7 mg/l (96 h) - R.C.Bahner and D.J.Hansen (Eds.), Aquatic Toxicology and Hazard Assessment, 8th Symposium, ASTM STP 891, Philadelphia, PA :193-212

Xylene (mixture of isomers) - LC50: 15.7 mg/l (96 h) - R.C.Bahner and D.J.Hansen (Eds.), Aquatic Toxicology and Hazard Assessment, 8th Symposium, ASTM STP 891, Philadelphia, PA :193-212

Toluene - LC50: 31.7 mg/l (96 h) - Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Volume 5. Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :332 p.

Daphnia toxicity:

Xylene (mixture of isomers) - LC50: 8.5 mg/l (48 h) - Tatem, H.E., B.A. Cox, and J.W. Anderson 1978. The Toxicity of Oils and Petroleum Hydrocarbons to Estuarine Crustaceans. *Estuar.Coast.Mar.Sci.* 6(4):365-373

Xylene (mixture of isomers) - LC50: 8.5 mg/l (48 h) - Tatem, H.E., B.A. Cox, and J.W. Anderson 1978. The Toxicity of Oils and Petroleum Hydrocarbons to Estuarine Crustaceans. *Estuar.Coast.Mar.Sci.* 6(4):365-373

Toluene - EC50: 9.24 mg/l (48 h) - MacLean, M.M., and K.G. Doe 1989. The Comparative Toxicity of Crude and Refined Oils to *Daphnia magna* and *Artemia*. Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p

Toluene - LC50: 92 mg/l (48 h) - MacLean, M.M., and K.G. Doe 1989. The Comparative Toxicity of Crude and Refined Oils to *Daphnia magna* and *Artemia*. Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.

Algae toxicity:

Toluene - EC50: 12.5 mg/l (72 h) - Galassi, S., M. Mingazzini, L. Vigano, D. Cesareo, and M.L.Tosato 1988. Approaches to Modeling Toxic Responses of Aquatic Organisms to Aromatic Hydrocarbons. *Ecotoxicol.Environ.Saf.* 16(2):158-169

Bacteria toxicity:

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

no data available

SECTION 14: Transport information

Land transport (DOT)

UN-No.:	1307
Proper Shipping Name:	XYLENES
Class(es):	3
Classification code:	F1
Hazard label(s):	3
Packing group:	III
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

Sea transport (IMDG)

UN-No.:	1307
Proper Shipping Name:	XYLENES
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	III
Environmental hazards:	No
MARINE POLLUTANT:	no data available
Special precautions for user:	
Segregation group:	-
EmS-No.	F-E S-D
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant	

Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1307
Proper Shipping Name:	XYLENES
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	III
Special precautions for user:	

SECTION 15: Regulatory information

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

SARA 313 Components

- Xylene (mixture of isomers) - CAS No.: 1330-20-7
- Ethylbenzene - CAS No.: 100-41-4
- Toluene - CAS No.: 108-88-3

Massachusetts Right To Know Components

- Xylene (mixture of isomers) - CAS No.: 1330-20-7
- Ethylbenzene - CAS No.: 100-41-4
- Toluene - CAS No.: 108-88-3

Pennsylvania Right To Know Components

- Xylene (mixture of isomers) - CAS No.: 1330-20-7
- Ethylbenzene - CAS No.: 100-41-4
- Toluene - CAS No.: 108-88-3

New Jersey Right To Know Components

- Xylene (mixture of isomers) - CAS No.: 1330-20-7
- Ethylbenzene - CAS No.: 100-41-4
- Toluene - CAS No.: 108-88-3

California Prop. 65 Components

- Ethylbenzene - CAS No.: 100-41-4 (cancer)
- Toluene - CAS No.: 108-88-3 (developmental)

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Additional information

Indication of changes: none/none

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.