Technical Data Sheet

Xylene ACS Grade

ACS Grade

Alliance Code	Revised	Revision
xylene-acs-grade	2026-10-13	1.5

CAS number	UN number	Hazard class · packing group
1330-20-7	UN1307	3 · PG III
	Grade ACS Grade	**Signal word** **Danger**

Hazards

Flammable | Irritant / harmful | Health hazard — H226 H304 H312 H315 H319 H332 H335 H351 H373

Proper shipping name

Xylenes

IDENTITY & COMPOSITION

PRODUCT NAME
Xylene ACS Grade

ALLIANCE CODE
xylene-acs-grade

GRADE
ACS Grade

CONCENTRATION
—

CAS NUMBER
1330-20-7 Adjudicated

PRODUCT TYPE
Pure substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (Xylene Isomers & Ethyl Benzene), corrected for water	98.5% min.	—	—	Interpreted
Ethyl Benzene	NMT 25.0%	—	—	Interpreted
Color (APHA)	10 max.	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Residue After Evaporation	0.002% max.	—	—	Interpreted
Substances Darkened by Sulfuric Acid	To Pass Test	—	—	Interpreted
Sulfur Compounds (as S)	0.003% max	—	—	Interpreted
Water	0.05% max	—	—	Interpreted
Identification	Conforms to structure	—	FTIR, compared to reference spectrum	Interpreted

Values are reproduced from the current product reference. Source labels do not by themselves establish a supplier guarantee or a test result for your lot. Confirm applicable acceptance limits and request lot-specific documentation.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE ACS Grade	—	—	current
Technical	—	—	xylene

Typical assay for each grade is the average of its recent lots. Confirm a grade meets your specification before substituting it.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear, pale liquid with transparent visual profile	Adjudicated
Form	Liquid	Published reference
Odor	Sweet, pungent aromatic odor	Adjudicated
Specific Gravity	0.86–0.87 at 20–25 °C (water = 1)	Adjudicated
Density	0.860 - 0.875 g/cm^3 at 25 °C	Interpreted
Boiling Point	137–140 °C (279–284 °F)	Adjudicated
Melting Point	-47°C (-52.6°F)	Adjudicated
Flash Point	25–27 °C (77–81 °F), closed cup	Adjudicated
Vapor Pressure	7–8 mmHg (0.9–1.1 kPa) at 20 °C	Adjudicated
Vapor Density	3.7 (air = 1)	Adjudicated
Solubility (water)	Very slightly soluble in water; miscible with most organic solvents	Adjudicated
Refractive Index (nD 20)	1.4940 - 1.5000	Interpreted

MATERIALS OF CONSTRUCTION SERVICE ENVELOPE ≈ 100%

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Buna-N (NBR) Elastomer	Poor	—	Poor for aromatic hydrocarbons.	Parker O-ring Chemical Compatibility
EPDM Elastomer	Not recommended	—	Swells in hydrocarbons; never use.	Parker O-ring Chemical Compatibility

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Viton (FKM) Elastomer	Excellent	100	Standard for hydrocarbon service.	Parker O-ring Chemical Compatibility
PTFE Fluoropolymer	Excellent	200	Universal.	Cole-Parmer Chemical Compatibility
316L Stainless Steel Metal	Excellent	100	Inert.	Cole-Parmer Chemical Compatibility
Carbon Steel Metal	Good	80	Acceptable for dry hydrocarbons.	Cole-Parmer Chemical Compatibility
HDPE Thermoplastic	Not recommended	—	Aromatic solvents swell and dissolve HDPE.	INEOS HDPE Chemical Resistance Guide

Ratings reflect the service envelope (concentration × temperature) shown. Always confirm against your specific duty cycle and contact-time before equipment selection. The most cautious rating across overlapping references is shown.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN1307 Adjudicated

HAZARD CLASS

3 Adjudicated

PACKING GROUP

III Adjudicated

PROPER SHIPPING NAME

Xylenes Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD

Danger Adjudicated

H-CODES (HAZARD STATEMENTS)

H226, H304, H312, H315, H319, H332, H335, H351, H373

Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

P201, P202, P210, P233, P240, P241, P242, P243, P260, P261, P264, P270, P271, P280, P301+P310, P302+P352, P303+P361+P353, P304+P340, P305+P351+P338, P308+P313, P312, P314, P321, P331, P332+P313, P337+P313, P362, P370+P378, P403+P233, P403+P235, P405, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

100 ppm TWA (CAS 1330-20-7); 100 ppm TWA (CAS 100-41-4)

Adjudicated

ACGIH TLV

100 ppm TWA / 150 ppm STEL (CAS 1330-20-7); 20 ppm TWA (CAS 100-41-4)

Adjudicated

NIOSH REL

100 ppm TWA / 150 ppm STEL NIOSH Pocket Guide

NIOSH IDLH

900 ppm NIOSH Pocket Guide

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

HEALTH & FIRE HAZARD

ACUTE TOXICOLOGY

LD_{50} ORAL (RAT)

3523–4300 mg/kg (CAS 1330-20-7)

Adjudicated

LD_{50} DERMAL (RABBIT)

> 1700 mg/kg (CAS 1330-20-7)

Adjudicated

LC_{50} INHALATION (RAT, 4 H)

5000 ppm (CAS 1330-20-7)

Adjudicated

Acute toxicology values from SDS Section 11 or NIOSH RTECS.

CATALOG EQUIVALENTS CROSS-REFERENCE VS MAJOR CHEMICAL SUPPLIERS

SIGMA-ALDRICH

SKU	GRADE	CONC.	MATCH	NOTES
534056	ACS Reagent	98.5%	Unverified candidate	ACS Reagent xylenes mixed isomers

Cross-references are informational. Confirm against the manufacturer's current specification before substitution. Competitor trademarks are property of their respective owners.

APPLICATIONS

High-solvency aromatic solvent used in adhesives, coatings, roofing, cleaning and printing

exxonmobilchemical.com

ACS reagent xylenes are supplied for research use only and restricted to qualified laboratories and businesses

chemsavers.com

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

STORAGE & HANDLING

RECOMMENDED STORAGE

Store in a segregated, approved flammables area in tightly closed original containers, cool, dry, well-ventilated and out of direct sunlight, preferably sprinkler-protected. Keep away from oxidizing materials and strong acids. Store locked up. Ground and bond containers when transferring.

Adjudicated

HANDLING PRECAUTIONS

Eliminate ignition sources. Use chemical-resistant nitrile or PVA gloves. Bond and ground all transfer equipment. Vapors heavier than air — control ventilation accordingly.

Class-level guidance — not product-specific; the SDS controls.

INCOMPATIBILITIES

Strong oxidizing agents (including nitric acid); strong acids, including acetic acid; halogens.

Adjudicated

SHELF LIFE

Consult Technical Services for product-specific shelf life

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

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UN1307, Xylenes, 3, PG III
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Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS	PLACARD	PACKING GROUP
77.5	Flammable Liquid	PG III

REVISION HISTORY

Last reviewed 2026-10-13 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.5	2026-10-13	Canonical data updated: 5 fields changed via the provenance/adjudication pipeline. • `storage_precautions` · canonical change (coa.data_provenance / adjudication) • `incompatible_materials` · canonical change (coa.data_provenance / adjudication) • `conditions_to_avoid` · canonical change (coa.data_provenance / adjudication) • `hazardous_decomposition_products` · canonical change (coa.data_provenance / adjudication) • `recommended_use` · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.4	2026-10-08	Canonical data updated: 22 fields changed via the provenance/adjudication pipeline. • ghsClassification · canonical change (coa.data_provenance / adjudication) • hazard_h_codes · canonical change (coa.data_provenance / adjudication) • hazard_p_codes · canonical change (coa.data_provenance / adjudication) • oel_osha_pel · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication) • boilingPoint · canonical change (coa.data_provenance / adjudication) • vaporPressure · canonical change (coa.data_provenance / adjudication) • vaporDensity · canonical change (coa.data_provenance / adjudication) • specificGravity · canonical change (coa.data_provenance / adjudication) • solubility · canonical change (coa.data_provenance / adjudication) • explosiveLimits · canonical change (coa.data_provenance / adjudication) • evaporationRate · canonical change (coa.data_provenance / adjudication) • partitionCoefficient · canonical change (coa.data_provenance / adjudication) • odor · canonical change (coa.data_provenance / adjudication) • odorThreshold · canonical change (coa.data_provenance / adjudication) • oel_acgih_tlv · canonical change (coa.data_provenance / adjudication) • rcra_waste_codes · canonical change (coa.data_provenance / adjudication) • cercla_rq · canonical change (coa.data_provenance / adjudication) • dot_transport_note · canonical change (coa.data_provenance / adjudication) • synonyms · canonical change (coa.data_provenance / adjudication) • restrictions_on_use · canonical change (coa.data_provenance / adjudication) • recommended_use · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-09-30	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • boilingPoint · canonical change (coa.data_provenance / adjudication) • meltingPoint · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication) • appearance · canonical change (coa.data_provenance / adjudication)	canonical_change
1.2	2026-07-22	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication) • dotProperShippingName · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-06-18	Canonical data re-verified: 4 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable). • casNumber · canonical adjudication / reground (coa.data_provenance) • countryOfOrigin · canonical adjudication / reground (coa.data_provenance) • ghsClassification · canonical adjudication / reground (coa.data_provenance) • hsCode · canonical adjudication / reground (coa.data_provenance)	canonical_change
1.0	2026-05-20	Initial URL-first TDS published from canonical chemistry registry.	initial

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.