

TECHNICAL DATA SHEET

Trichloroethylene (TCE) ACS Grade

ACS Grade

CAS NUMBER	ALLIANCE CODE	GENERATED
79-01-6	trichloroethylene-tce-acs-grade	2026-08-31
REVISION	REVIEWED	
1.3	2026-06-18 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Trichloroethylene (TCE) ACS Grade	trichloroethylene-tce-acs-grade
GRADE	CONCENTRATION
ACS Grade	—
CAS NUMBER	FORMULA
79-01-6 PubChem	C2HCl3 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
131.38 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (Trichloroethylene)	≥99.5%	99.9 %	GC-FID, corrected for water and stabilizer	Supplier specification
Titrateable Acid	≤0.0001meq/g	0.00002 meq/g	titration	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Titration base	0.0003 meq/g maximum	0.00005 meq/g	—	ACS Reagent Chemicals
Free halogens	To Pass Test	Passes test	—	ACS Reagent Chemicals
Heavy Metals (as Pb)	≤1ppm	0.2 ppm	—	Supplier specification
Residue after evaporation	10 ppm maximum	2 ppm	—	ACS Reagent Chemicals
Water (H ₂ O)	200 ppm maximum	60 ppm	—	ACS Reagent Chemicals
Identification	Conforms to structure	Passes test	FTIR, comparison to reference spectrum	Interpreted
Substances darkened by sulfuric acid	To pass test	Passes test	Visual comparison after H ₂ SO ₄ contact	Interpreted
residue	0.001 % max	0.0002 %	—	Supplier specification

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

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

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
Technical Grade	—	—	trichloroethylene-tce-technical-grade

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Colorless liquid	Supplier specification
Form	Liquid	Published reference
Color	10 maximum	ACS Reagent Chemicals
Odor	Ethereal odor	Published reference
Specific Gravity (20 °C)	1.460 – 1.466	Interpreted
Density	1.46 at 68 °F (USCG, 1999) – Denser than water; will sink	Published reference
Boiling Point	86.0 – 88.0 °C	Interpreted
Melting Point	–99 °F (NTP, 1992)	Published reference
Flash Point	greater than 200 °F (NTP, 1992)	Published reference
Vapor Pressure	60 mmHg at 68 °F ; 77 mmHg at 77 °F (NTP, 1992)	Published reference
Solubility (water)	less than 1 mg/mL at 70 °F (NTP, 1992)	Published reference
Refractive Index (nD 20)	1.4760 – 1.4780	Interpreted

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN1710 [49 CFR 172.101](#)

PACKING GROUP

III [Adjudicated](#)

HAZARD CLASS

6.1 [Adjudicated](#)

PROPER SHIPPING NAME

Trichloroethylene [Adjudicated](#)

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger [Adjudicated](#)

H-CODES (HAZARD STATEMENTS)

H315, H319, H336, H341, H350, H412

[ECHA CLP Annex VI](#)

P-CODES (PRECAUTIONARY STATEMENTS)

P201, P202, P261, P264, P271, P273, P280,
P281, P302+P352, P305+P351+P338,
P308+P313, P312, P321, P332+P313,
P337+P313, P362, P391, P403+P233, P405,
P501

[ECHA CLP Annex VI](#)

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

100 ppm TWA / 200 ppm acceptable ceiling /
300 ppm 5-min peak

[OSHA 29 CFR 1910.1000](#)

ACGIH TLV

— [no canonical](#)

NIOSH REL

Ca (carcinogen — minimize occupational
exposure)

[NIOSH Pocket Guide](#)

NIOSH IDLH

1000 ppm [NIOSH Pocket Guide](#)

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

APPLICATIONS

Solvent used for degreasing, cold cleaning, and specialized industrial applications [chemceed.com](#)

Degreaser for metal parts; also used in paint removers, adhesives, and the dry cleaning/textiles industry

[laballey.com](#)

Laboratory solvent and cleaning reagent in research laboratories [laballey.com](#)

Vapor degreasing, cold cleaning, metal cleaning, electronics, extraction solvent, and adhesives & cements

chemceed.com

Cleaning reagent laballey.com

Paint removers laballey.com

Adhesives laballey.com

Dry cleaning and textile-industry applications laballey.com

Research laboratories laballey.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

Light sensitive; keep tightly closed in light-resistant containers

sciencelab.com

INCOMPATIBILITIES

Consult the SDS for material-specific incompatibilities.

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

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.

HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

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

SHELF LIFE

Consult Technical Services for product-specific shelf life

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN1710, Trichloroethylene, 6.1, PG III

Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
70

PLACARD
Toxic

PACKING GROUP
PG III

REVISION HISTORY

Last reviewed 2026-06-18 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
1.3	2026-08-05	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. - hazardClass · canonical change (coa.data_provenance / adjudication) - packingGroup · canonical change (coa.data_provenance / adjudication) - signalWord · canonical change (coa.data_provenance / adjudication) - unNumber · canonical change (coa.data_provenance / adjudication)	canonical_change
1.2	2026-07-22	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-06-18	Canonical data re-verified: 3 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). - 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.