

TECHNICAL DATA SHEET

Perchloroethylene (PCE, PERC)

Technical

CAS NUMBER	ALLIANCE CODE	GENERATED
127-18-4	perchloroethylene-pce-perc	2026-08-31
REVISION	REVIEWED	
1.3	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Perchloroethylene (PCE, PERC)	perchloroethylene-pce-perc
GRADE	CONCENTRATION
Technical	—
CAS NUMBER	FORMULA
127-18-4 PubChem	C2Cl4 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
165.8 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (Perchloroethylene, stabilizer-free basis)	99.9 % by weight min.	99.95 % by weight	—	Supplier specification
Acid acceptance (as NaOH)	0.20 % by weight min.	0.28 % by weight	—	Supplier specification
Soluble chloride	1.0 ppm max.	0.1 ppm	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Copper corrosion	Passes Test	Passes test	—	Supplier specification
Free chlorine	None	Passes test	—	Supplier specification
Free halogens	Passes Test	Passes test	ASTM D 4755	Supplier specification
Acidity-Alkalinity (pH)	8.0 – 9.0 pH	8.5	—	Supplier specification
Non-volatile residue	25 ppm max.	4 ppm	—	Supplier specification
Spot or cleanliness	No spot or stain	Passes test	—	Supplier specification
Water (H ₂ O)	30 ppm max.	12 ppm	—	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.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear, No Sediment	Supplier specification
Form	Liquid	Published reference
Color	15 Pt-Co max.	Supplier specification
Odor	Characteristic ethereal, no foreign odor	Interpreted
Specific Gravity (20 °C)	1.623 - 1.628	Supplier specification
Density	1.63 at 68 °F (USCG, 1999) - Denser than water; will sink	Published reference
Boiling Point	120.0 - 122.0 °C	Supplier specification
Melting Point	-2 °F (NTP, 1992)	Published reference
Flash Point	No flash point in conventional closed tester.	Published reference
Vapor Pressure	14 mmHg at 68 °F ; 15.8 mmHg at 72 °F (NTP, 1992)	Published reference
Solubility (water)	less than 0.1 mg/mL at 63 °F (NTP, 1992)	Published reference

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
stainless steel	Compatible	neat perchloroethylene as shipped in bulk; source states no concentration or temperature limit	oxychem.com

Compatibility is drawn from published manufacturer and supplier documentation for this product; each rating is sourced. Confirm against your specific duty cycle before equipment selection.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN1897 **Adjudicated**

PACKING GROUP

III **Adjudicated**

HAZARD CLASS

6.1 **Adjudicated**

PROPER SHIPPING NAME

Tetrachloroethylene **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H315, H317, H319, H336, H351, H370, H373, H411

Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

P201, P202, P260, P264, P270, P273, P280, P281, P308+P311, P308+P313, P314, P391, P405, P501

Adjudicated

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

150 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

Supplied as an all-purpose / degreasing solvent grade of perchloroethylene **westlake.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

Cool, dry, well-ventilated area in original sealed containers. Refer to product SDS for material-specific guidance.

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

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)

UN1897, Tetrachloroethylene, 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
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REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
1.3	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	2026-07-17	Canonical data re-verified: 6 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). • <code>countryOfOrigin</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>ghsClassification</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hazard_h_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hazard_p_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hsCode</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>signalWord</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)	canonical_change
1.2	2026-07-17	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • <code>ghsClassification</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>hazard_h_codes</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>hazard_p_codes</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>signalWord</code> · canonical change (<code>coa.data_provenance / adjudication</code>)	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.