Technical Data Sheet

Petroleum Ether ACS Reagent Grade

ACS Reagent

Alliance Code	Revised	Revision
petroleum-ether-acs-reagent-grade	2026-10-07	1.7

CAS number 8032-32-4	UN number UN1268	Hazard class · packing group 3 · PG II
	Grade ACS Reagent	Signal word **Danger**

Hazards

Flammable | Irritant / harmful | Health hazard — H225 H304 H336 H340 H350

Proper shipping name

Petroleum distillates, n.o.s. (Petroleum ether)

IDENTITY & COMPOSITION

PRODUCT NAME
Petroleum Ether ACS Reagent Grade

ALLIANCE CODE
petroleum-ether-acs-reagent-grade

GRADE
ACS Reagent

CONCENTRATION
—

CAS NUMBER
8032-32-4 Adjudicated

PRODUCT TYPE
Pure substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Acidity	To pass test	—	—	Interpreted
Benzene (GC)	max 2 ppm	—	GC	Interpreted
Color (APHA)	max 10	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Copper Corrosion	To Pass	—	—	Interpreted
Doctor Test	negative	—	—	Interpreted
Residue After Evaporation	max. 10 ppm	—	—	Interpreted
Substances darkened by sulfuric acid	Passes test	—	—	Interpreted
Sulphur compounds (as S)	max. 0.005 %	—	—	Interpreted
Water	0.02% max.	—	Coulometry	Interpreted
Identification (GC-FID)	Conforms to reference chromatogram	—	GC-FID retention profile vs. reference standard	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 Reagent	—	—	current
Technical Grade	—	—	petroleum-ether-technical-grade

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, colorless liquid	Adjudicated
Form	Liquid	Published reference
Odor	Petroleum (gasoline-like) odor	Adjudicated
Specific Gravity	0.64–0.66 at 20 °C (water = 1)	Adjudicated
Boiling Point	35–60 °C (95–140 °F) boiling range	Adjudicated
Flash Point	Below -18 °C (0 °F), closed cup	Adjudicated
Vapor Pressure	About 540 mmHg (724 hPa) at 20 °C	Adjudicated
Solubility (water)	Insoluble in water; miscible with most organic solvents	Adjudicated

MATERIALS OF CONSTRUCTION SERVICE ENVELOPE ≈ 100%

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Buna-N (NBR) Elastomer	Good	80	Good for non-aromatic hydrocarbons; poor for aromatics.	Parker O-ring Chemical Compatibility
EPDM Elastomer	Not recommended	—	Swells in hydrocarbons; never use.	Parker O-ring Chemical Compatibility
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

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Carbon Steel Metal	Good	80	Acceptable for dry hydrocarbons.	Cole-Parmer Chemical Compatibility
HDPE Thermoplastic	Not recommended	—	Unsatisfactory even at room temperature.	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

UN1268 49 CFR 172.101

HAZARD CLASS

3 Adjudicated

PACKING GROUP

II Adjudicated

PROPER SHIPPING NAME

Petroleum distillates, n.o.s. (Petroleum ether)

Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD

Danger Adjudicated

H-CODES (HAZARD STATEMENTS)

H225, H304, H336, H340, H350 Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

P201, P202, P210, P233, P240, P241, P242, P243, P261, P271, P280, P301+P310, P303+P361+P353, P304+P340, P308+P313, P312, P331, P370+P378, P403+P233, P403+P235, P405, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

None (CAS 8032-32-4) Adjudicated

ACGIH TLV

— no canonical

NIOSH REL

350 mg/m³ TWA; 1,800 mg/m³ Ceiling (15 min) (CAS 8032-32-4)

Adjudicated

NIOSH IDLH

— no canonical

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

> 5,840 mg/kg (rat) Adjudicated

LD_{50} DERMAL (RABBIT)

> 2,920 mg/kg Adjudicated

LC_{50} INHALATION

3,400 ppm (rat, 4 h)

Adjudicated

Acute toxicology values from SDS Section 11 or NIOSH RTECS.

APPLICATIONS

Laboratory solvent (ACS reagent): extraction of fats and oils, chromatography and recrystallization.

Adjudicated

Restrictions on Use: Not for use as a fuel or in consumer products. Extremely flammable and may cause cancer: use only with adequate ventilation, away from ignition sources, by trained personnel.

STORAGE & HANDLING

RECOMMENDED STORAGE

Keep tightly closed in a cool, well-ventilated flammables area away from heat, ignition sources and oxidizers. Ground and bond containers. Store locked up.

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 (peroxides, nitric acid, perchlorates, chlorine); strong acids.

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)

```
UN1268, Petroleum distillates, n.o.s. (Petroleum ether), 3, PG II
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Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS	PLACARD	PACKING GROUP
70	Flammable Liquid	PG II

REVISION HISTORY

Last reviewed 2026-10-07 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.7	2026-10-07	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) • `synonyms` · canonical change (coa.data_provenance / adjudication) • `restrictions_on_use` · canonical change (coa.data_provenance / adjudication) • `odor` · 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) • `solubility` · canonical change (coa.data_provenance / adjudication) • `explosiveLimits` · canonical change (coa.data_provenance / adjudication) • `specificGravity` · canonical change (coa.data_provenance / adjudication) • `oel_osha_pel` · canonical change (coa.data_provenance / adjudication) • `oel_niosh_rel` · 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) • `storage_precautions` · 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) • `recommended_use` · canonical change (coa.data_provenance / adjudication)	`canonical_change`

VERSION	DATE	CHANGE	TRIGGER
1.6	2026-10-05	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • oel_niosh_rel · canonical change (coa.data_provenance / adjudication)	canonical_change
1.5	2026-10-03	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • boilingPoint · canonical change (coa.data_provenance / adjudication)	canonical_change
1.4	2026-09-30	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • boilingPoint · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication) • appearance · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-08-05	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • hazardClass · canonical change (coa.data_provenance / adjudication) • unNumber · 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) • packingGroup · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-07-17	Canonical data re-verified: 7 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) • hazard_h_codes · canonical adjudication / reground (coa.data_provenance) • hazard_p_codes · canonical adjudication / reground (coa.data_provenance) • hsCode · canonical adjudication / reground (coa.data_provenance) • signalWord · 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.