Technical Data Sheet

Mineral Spirits - Odorless Solvent & Thinner Technical Grade

Technical

Alliance Code	Revised	Revision
mineral-spirits	2026-10-13	1.8

CAS number	UN number	Hazard class · packing group
64742-47-8	UN1268	3 · PG III
	Grade Technical	**Signal word** **Danger**

Hazards

Flammable | Irritant / harmful | Health hazard — H226 H304 H336

Proper shipping name

Petroleum distillates, n.o.s. (Mineral spirits)

IDENTITY & COMPOSITION

PRODUCT NAME
Mineral Spirits - Odorless Solvent & Thinner Technical Grade

ALLIANCE CODE
mineral-spirits

GRADE
Technical

CONCENTRATION
—

CAS NUMBER
64742-47-8 Adjudicated

PRODUCT TYPE
Pure substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Aromatic content	2500 Max ppm	—	ASTM D3257 (method not printed on source)	Interpreted
API gravity at 60 °F	51.1 - 59.7	—	ASTM D1298 / D4052 (method not printed on source)	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Distillation, initial boiling point	325 Min °F	—	ASTM D86 (method not printed on source)	Interpreted
Color, Saybolt	30 min	—	D-156	Interpreted
Copper corrosion, 3 hr at 212 °F	1 Max	—	ASTM D130	Interpreted
Distillation, dry point	410 Max °F	—	ASTM D86 (method not printed on source)	Interpreted
Distillation, IBP	340 min (171.0 °C)	—	D-86	Interpreted
Doctor test	Sweet	—	ASTM D4952	Interpreted
Flash point (TCC)	115 Min °F	—	ASTM D56 (Tag closed cup)	Interpreted
Kauri-butanol value	29 Max	—	ASTM D1133 (method not printed on source)	Interpreted
Aniline point	165 °F min	—	ASTM D611	Interpreted
Nonvolatile matter (residue after evaporation)	5 mg/100 mL max	—	ASTM D1353	Interpreted
Sulfur, total	15 mg/kg max	—	ASTM D5453 (UV fluorescence)	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.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Colorless liquid	Adjudicated
Form	Liquid	Published reference
Odor	Mild hydrocarbon odor (odorless grade)	Adjudicated
Specific Gravity	0.76 at 15–20 °C (water = 1)	Adjudicated
Boiling Point	177-202 °C (352-396 °F), distillation range (ASTM D86)	Adjudicated
Melting Point	-58	Published reference
Flash Point	60 °C (140 °F), Tag closed cup (ASTM D56)	Adjudicated
Vapor Pressure	< 1–3 mmHg at 20–25 °C	Adjudicated
Vapor Density	4.5–5.3 (air = 1)	Adjudicated
Solubility (water)	Negligible in water	Adjudicated
Viscosity	1.12 mm^2/s at 38 °C	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

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
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	Fair	21	Some attack on long contact at room temperature. HDPE drums, pails and totes are standard containers for kerosene and mineral spirits. Not for heated service.	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

III Adjudicated

PROPER SHIPPING NAME

Petroleum distillates, n.o.s. (Mineral spirits)

Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD

Danger Adjudicated

H-CODES (HAZARD STATEMENTS)

H226, H304, H336 Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

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

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

500 ppm TWA OSHA 29 CFR 1910.1000

ACGIH TLV

100 ppm TWA (Stoddard solvent) Adjudicated

NIOSH REL

350 mg/m^3 TWA / 1800 mg/m^3 Ceiling (15 min)

NIOSH IDLH

20000 mg/m^3 NIOSH Pocket Guide

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)

> 5,000 mg/kg Adjudicated

LD_{50} DERMAL (RABBIT)

> 2,000–5,000 mg/kg

Adjudicated

LC_{50} INHALATION (RAT, 4 H)

> 4.9–5.2 mg/L (vapor)

Adjudicated

Acute toxicology values from SDS Section 11 or NIOSH RTECS.

APPLICATIONS

Used for painting, cleaning, and mechanics work as a highly refined, very low odor solvent. corechemInc.com

Solvent fluid for aerosols, cleaning, coatings, household products, liquid toners, metalworking and radical polymerization processes — stated for a high-purity synthetic isoparaffinic odorless mineral spirits, not for technical-grade material.

exxonmobilchemical.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

Keep containers tightly closed in a cool, dry, well-ventilated area away from heat, sparks, open flame and other ignition sources. No smoking. Do not pressurize, cut or weld containers. 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 (chlorates, nitrates, peroxides), halogens, strong acids and alkalis.

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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UN1268, Petroleum distillates, n.o.s. (Mineral spirits), 3, PG III
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Packaging-dependent regulation: Non-bulk packaging (≤ 119 gal, e.g. drums, pails, cans) ships as NON-REGULATED under the combustible-liquid reclassification (49 CFR 173.150(f)). Bulk packaging (totes/IBC > 119 gal) ships fully regulated under the DOT profile shown above. The combustible-liquid reclassification does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable (49 CFR 173.120(b)(2)).

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

NMFC CLASS	PLACARD (BULK ONLY)	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
1.8	2026-10-13	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • storage_precautions · canonical change (coa.data_provenance / adjudication)	canonical_change
1.7	2026-10-07	Canonical data updated: 17 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) • recommended_use · canonical change (coa.data_provenance / adjudication) • restrictions_on_use · canonical change (coa.data_provenance / adjudication) • odor · 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) • viscosity · canonical change (coa.data_provenance / adjudication) • oel_acgih_tlv · 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) • rcra_waste_codes · canonical change (coa.data_provenance / adjudication)	canonical_change
1.6	2026-10-05	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • oel_niosh_rel · canonical change (coa.data_provenance / adjudication) • oel_idlh · canonical change (coa.data_provenance / adjudication) • oel_osha_pel · canonical change (coa.data_provenance / adjudication)	canonical_change
1.5	2026-09-30	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • appearance · canonical change (coa.data_provenance / adjudication)	canonical_change
1.4	2026-09-10	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • flashPoint · canonical change (coa.data_provenance / adjudication) • boilingPoint · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.3	2026-08-05	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • packingGroup · canonical change (coa.data_provenance / adjudication) • hazardClass · 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	2026-07-17	Canonical data re-verified: 9 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). • bulkThresholdGallons · canonical adjudication / reground (coa.data_provenance) • 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) • regulationRule · 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.