

TECHNICAL DATA SHEET

Denatured Alcohol 200 Proof 3A Technical Grade

Technical

CAS NUMBER	ALLIANCE CODE	GENERATED
64-17-5	denatured-alcohol-200-proof-3a	2026-08-31
REVISION	REVIEWED	
1.2	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Denatured Alcohol 200 Proof 3A Technical Grade	denatured-alcohol-200-proof-3a
GRADE	CONCENTRATION
Technical	—
CAS NUMBER	FORMULA
64-17-5 PubChem	C2H6O PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
46.07 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Acidity (as acetic acid)	NMT 0.0025% (wt/wt)	0.0005 %	Not stated	Supplier specification
Denaturant formula compliance (SDA Formula No. 3-A)	Five gallons of denaturant per 100 gallons of alcohol	Passes test	—	Federal regulation

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ethanol (200 Proof)	95.24% (v/v) +/- 0.48%	95.24 %	Not stated	Supplier specification
Methanol	4.76% (v/v) +/- 0.24%	4.76 %	Not stated	Supplier specification
Water (Karl Fischer)	NMT 0.5% (wt/wt)	0.12 %	ASTM E1064 / Karl Fischer	Interpreted
Weight per gallon in air	6.62 – 6.64 lbs @ 15.56 °C (60 °F)	6.63	Calculated from density, ASTM D4052	Interpreted
Non-volatile residue	2.5 mg/100 ml, max.	0.5 mg/100 ml	Gravimetric, evaporation to dryness	Interpreted

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 Technical	—	—	current
Technical	95%	—	denatured-alcohol-190-proof-3a
Technical	95%	—	denatured-alcohol-190-proof-3c
Technical	—	—	denatured-alcohol-200-proof-3c

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	Ethanol with a small amount of an adulterant added so as to be unfit for use as a beverage.	Published reference
Form	Liquid	Published reference
Color	10 Max.	Supplier specification
Odor	Characteristic	Supplier specification
Specific Gravity (20 °C)	0.7902 – 0.7912 @ 20.0°C	Supplier specification
Density	0.79 at 68 °F (USCG, 1999) – Less dense than water; will float	Published reference
Boiling Point	173.3 °F at 760 mmHg (NTP, 1992)	Published reference
Melting Point	–173.4 °F (NTP, 1992)	Published reference
Flash Point	55 °F (NTP, 1992)	Published reference
Vapor Pressure	40 mmHg at 66 °F ; 50 mmHg at 77 °F (NTP, 1992)	Published reference
Solubility (water)	greater than or equal to 100 mg/mL at 73 °F (NTP, 1992)	Published reference

Polar solvent — purity vs. intended end-use (electronics, pharma, general industrial) is the dominant grade consideration. See application guidance for grade selection.

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Buna-N (NBR) Elastomer	Fair	60	Acceptable for alcohols; poor for ketones.	Parker O-ring Chemical Compatibility
EPDM Elastomer	Fair	—	Good for alcohols, poor for esters	Cole-Parmer Chemical Compatibility
Viton (FKM) Elastomer	Fair	80	Swells in acetone and esters; avoid for those.	Parker O-ring Chemical Compatibility
FFKM (Kalrez) Fluoropolymer	Excellent	200	Premium ester / ketone sealing	Cole-Parmer Chemical Compatibility
PTFE Fluoropolymer	Excellent	200	Universal solvent compatibility.	Cole-Parmer Chemical Compatibility
Borosilicate Glass Glass Ceramic	Excellent	100	Universally inert.	Cole-Parmer Chemical Compatibility
Glass (borosilicate) Glass Ceramic	Excellent	100	Inert	Cole-Parmer Chemical Compatibility
316L Stainless Steel Metal	Excellent	80	Inert; preferred for high-purity solvent service.	Cole-Parmer Chemical Compatibility
Aluminium Metal	Good	40	Acceptable; avoid prolonged wet contact	Cole-Parmer Chemical Compatibility
Carbon Steel Metal	Fair	50	Trace moisture causes rust; flash-rust prevention required.	Cole-Parmer Chemical Compatibility
HDPE Thermoplastic	Fair	40	Swells with many polar solvents; verify per solvent.	Cole-Parmer Chemical Compatibility

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
PP Thermoplastic	Good	50	Acceptable but watch swelling with esters	Cole-Parmer Chemical Compatibility
PVC Thermoplastic	Fair	25	Esters soften PVC; avoid for esters	Cole-Parmer Chemical Compatibility

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

UN1987 **Adjudicated**

HAZARD CLASS

3 **Adjudicated**

PACKING GROUP

II **Adjudicated**

PROPER SHIPPING NAME

Alcohols, n.o.s. **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H225, H319, H370 **Adjudicated**

P-CODES (PRECAUTIONARY STATEMENTS)

P210, P233, P240, P241, P242, P243, P260, P264, P270, P280, P303+P361+P353, P305+P351+P338, P307+P311, P321, P337+P313, P370+P378, P403+P235, P405, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— **no canonical**

ACGIH TLV

— **no canonical**

NIOSH REL

— **no canonical**

NIOSH IDLH

— **no canonical**

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

TTB-authorized as a solvent for cellulose and synthetic resin coatings, other coatings, and cellulose and non-cellulose plastics including resins.

law.cornell.edu

TTB-authorized as a proprietary solvent and in polishes, inks (including meat branding inks), wood stains, shampoos, and soap and bath preparations.

law.cornell.edu

TTB-authorized in disinfectants, insecticides, fungicides and other biocides, embalming fluids, sterilizing and preserving solutions, industrial detergents and soaps, and cleaning solutions.

law.cornell.edu

TTB-authorized use list includes processing pectin, other food products, crude drugs, vitamins, antibiotics and medicinal chemicals — this is a formula-scoped TTB authorization, not a food-grade or pharmaceutical-grade claim.

law.cornell.edu

TTB-authorized as a raw material for ethylamines, dyes and intermediates, drugs and medicinal chemicals, organo-silicone products, other chemicals, and synthetic resins.

law.cornell.edu

TTB-authorized as a fuel, including automobile, airplane, rocket and jet fuels, proprietary heating fuels, and other fuel uses.

law.cornell.edu

TTB-authorized as a fluid in scientific instruments, brake fluids, cutting oils, and refrigerating uses.

law.cornell.edu

TTB-authorized for general laboratory and experimental use (own use only), laboratory reagents for sale, and product development and pilot plant uses.

law.cornell.edu

The manufacturer's specification sheet for SDA 3A 200 Proof states the product is for further commercial manufacturing, laboratory use, or research.

greenfield.com

Manufacturer's spec sheet for SDA 3A 200 Proof lists use as a fuel: automobile, airplane, rocket and jet fuels, and proprietary heating fuels.

greenfield.com

Solvent for coatings, plastics, photographic materials, explosives, soldering flux, adhesives, polishes, inks, and stains.

greenfield.com

Laboratory, experimental, product-development, pilot-plant, and specialized uses. greenfield.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, well-ventilated flammable-liquid storage area. Tightly sealed original containers. Segregate from oxidizers and acids. Bond and ground bulk storage.
Class-level guidance — not product-specific; the SDS controls.

INCOMPATIBILITIES

Strong oxidizers, strong acids, isocyanates, anhydrides. Hygroscopic — protect from atmospheric moisture for water-sensitive end uses.
Class-level guidance — not product-specific; the SDS controls.

HANDLING PRECAUTIONS

Use chemical-resistant gloves and splash goggles. Bond and ground during transfer to prevent static accumulation. Eliminate ignition sources within vapor envelope.
Class-level guidance — not product-specific; the SDS controls.

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)

UN1987, Alcohols, n.o.s., 3, PG II

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

NMFC CLASS 70	PLACARD Flammable Liquid	PACKING GROUP PG II
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REVISION HISTORY

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

VERSION	DATE	CHANGE	TRIGGER
1.2	2026-07-22	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication) • unNumber · canonical change (coa.data_provenance / adjudication) • dotProperShippingName · canonical change (coa.data_provenance / adjudication)	canonical_change
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). • color · 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)	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.