

TECHNICAL DATA SHEET

Tert Butyl Acetate (TBA) Technical Grade

Reagent

CAS NUMBER	ALLIANCE CODE	GENERATED
540-88-5	tert-butyl-acetate-tba	2026-08-31
REVISION	REVIEWED	
1.3	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Tert Butyl Acetate (TBA) Technical Grade	tert-butyl-acetate-tba
GRADE	CONCENTRATION
Reagent	—
CAS NUMBER	FORMULA
540-88-5 PubChem	C6H12O2 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
116.16 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay / GC purity (tert-butyl acetate)	99.5 wt. %, min.	99.8 wt. %	Internal Method	Supplier specification
2,4,4-three Methyl 1 Pentene	Less than 0.2%	Passes test	—	Supplier specification
Evaporation residue	No more than 0.002%	0.0005%	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Tertiary Butyl Alcohol	Less than 0.2%	Passes test	—	Supplier specification
Water	0.05 wt. %, max.	0.015 wt. %	ASTM E-203	Supplier specification
Acidity (as acetic acid)	0.01 wt. %, max.	0.003 wt. %	ASTM D-1613	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	Colorless and transparent	Supplier specification
Form	Liquid	Published reference
Color	10, max.	Supplier specification
Odor	Characteristic ester odour; free of foreign odour	Interpreted
pH	6 ~ 7	Supplier specification
Density	0.860 ~ 0.866 g/cm ³ (Water=1)	Supplier specification
Boiling Point	95.0 – 98.5 °C	Interpreted
Melting Point	-5°C	Published reference
Flash Point	Report (typical -9 °C / 16 °F)	Interpreted
Vapor Pressure	47.0 [mmHg]	Published reference
Solubility (water)	Insoluble (NIOSH, 2024)	Published reference
Refractive Index (nD 20)	1.384 – 1.388	Interpreted

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

UN1123 **49 CFR 172.101**

HAZARD CLASS

3 **Adjudicated**

PACKING GROUP

II **Adjudicated**

PROPER SHIPPING NAME

Butyl acetates **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H225 **Adjudicated**

P-CODES (PRECAUTIONARY STATEMENTS)

P210, P233, P240, P241, P242, P243, P280,
P303+P361+P353, P370+P378, P403+P235,
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

VOC-exempt solvent used in lacquers, enamels, inks, adhesives, thinners and industrial cleaners

chemceed.com

Enhances compatibility with nitrocellulose, acrylic, alkyd, polyester and polyurethane resins, and works synergistically with other oxygen-containing solvents

chemceed.com

Industrial solvent uses including chlorinated-solvent alternative, adhesives and cements, baking enamels, circuit board cleaners, degreasers, inks, lacquers, MEK/MIBK alternative, paint and coatings

chemceed.com

Excellent solvency for nitrocellulose, acrylic, alkyd, polyester and urethane resins

shilpachemspec.com

Substitute for HAP and VOC solvents including toluene, xylene, esters, ketones and hydrocarbons

shilpachemspec.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.

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 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

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN1123, Butyl acetates, 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
1.3	2026-08-05	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. 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: 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.