

PRODUCT IDENTIFICATION



Product Name: N-Butyl Alcohol

CAS Number: 71-36-3

Molecular Formula: C₄H₁₀O

Molecular Weight: 74.12 g/mol

Grade: Technical Grade

Purity / Concentration: Not Available

Synonyms: Butanol, 1-Butanol

PRODUCT OVERVIEW

N-Butyl Alcohol (1-Butanol) is a high-purity Technical Grade solvent featuring a 99.8% assay and a low color profile of 8 APHA. This colorless, volatile liquid is essential for industrial applications requiring consistent performance, particularly in the formulation of high-quality paints, coatings, and chemical intermediates.

Grade Significance: Technical Grade indicates that this product is manufactured to meet consistent industrial standards, providing a reliable balance of purity and cost-effectiveness for large-scale manufacturing processes.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.8	99	100.5	Titration with standardized NaOH
Color (APHA)	APHA	8	—	15	APHA/Hazen visual comparison
Specific Gravity (20°C)	g/mL	0.81	0.805	0.815	Hydrometer or pycnometer at 20°C
Residue After Ignition	%	0.0010	—	0.01	Gravimetric residue after ignition
Water Content	%	0.02	—	0.05	Karl Fischer titration
Aluminum (Al)	ppm	0.2	—	1	ICP-OES
Arsenic (As)	ppm	0.1	—	0.5	ICP-OES
Calcium (Ca)	ppm	50	—	200.0	ICP-OES
Chromium (Cr)	ppm	0.2	—	1	ICP-OES
Cobalt (Co)	ppm	0.1	—	0.5	ICP-OES
Copper (Cu)	ppm	0.5	—	2	ICP-OES
Heavy Metals (as Pb)	ppm	0.1	—	0.5	ICP-MS
Iron (Fe)	ppm	1	—	5	ICP-OES
Lead (Pb)	ppm	0.05	—	0.2	ICP-OES
Magnesium (Mg)	ppm	30	—	150.0	ICP-OES
Manganese (Mn)	ppm	0.5	—	2	ICP-OES
Nickel (Ni)	ppm	0.2	—	1	ICP-OES
Potassium (K)	ppm	100.0	—	500.0	ICP-OES
Sodium (Na)	ppm	50	—	200.0	Ion Chromatography
Zinc (Zn)	ppm	0.5	—	2	ICP-OES
Ammonium (NH ₄ ⁺)	ppm	1	—	10	Ion Chromatography
Chloride (Cl ⁻)	ppm	5	—	20	Ion Chromatography
Nitrate (NO ₃ ⁻)	ppm	5	—	25	Ion Chromatography
Phosphate (PO ₄ ³⁻)	ppm	2	—	20	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	5	—	50	Ion Chromatography
Substances Darkened by H ₂ SO ₄	—	Passes test	—	—	Colorimetric with sulfuric acid treatment
Substances Reducing KMnO ₄	—	Passes test	—	—	Potassium permanganate time test
Acidity (meq)	meq	0.05	—	0.1	Titration with standardized NaOH
Aldehydes	ppm	10	—	50	Gas Chromatography

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, volatile liquid with a characteristic odor	Odor	Mild, alcoholic odor
Form	Liquid	Boiling Point	117°C (242.6°F)
Melting / Freezing Point	-89°C (-128.2°F)	Flash Point	35°C (95°F)
Specific Gravity	0.81	Solubility	Miscible with water, alcohols, and many organic solvents
Molecular Formula	C ₄ H ₁₀ O	Molecular Weight	74.12 g/mol
Vapor Pressure (20°C)	5.2 mmHg	Viscosity (25°C)	0.54 cP
Refractive Index (20°C)	1.398	Density (25°C)	0.810 g/mL
Decomposition Temp.	Not readily decomposed under normal conditions		

APPLICATIONS

- 1. Paints and Coatings** — Functions as a versatile solvent that improves flow and leveling properties in various paint and lacquer formulations.
- 2. Chemical Manufacturing** — Serves as a critical intermediate in the synthesis of butyl acetate and various esters used in downstream chemical production.
- 3. Industrial Cleaning** — Utilized in specialty cleaning formulations due to its effective solvency power in removing oils, resins, and greases.
- 4. Analytical Chemistry** — Commonly employed as a mobile phase component in high-performance liquid chromatography (HPLC) procedures.

STORAGE & HANDLING

Proper storage is essential because N-Butyl Alcohol is a flammable liquid with a flash point of 35°C, requiring a cool, well-ventilated area away from ignition sources. Maintaining these conditions prevents the buildup of flammable vapors and ensures the chemical remains stable for industrial use.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Ensure proper ventilation when handling to minimize inhalation exposure.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 55 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H226: Flammable liquid and vapor [Warning Flammable liquids]
- H302: Harmful if swallowed [Warning Acute toxicity, oral]
- H315: Causes skin irritation [Warning Skin corrosion/irritation]
- H318: Causes serious eye damage [Danger Serious eye damage/eye irritation]
- H335: May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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