

### PRODUCT IDENTIFICATION



**Product Name:** Isobutyl Alcohol 99% ACS Grade

**CAS Number:** 78-83-1

**Molecular Formula:** C<sub>4</sub>H<sub>10</sub>O

**Molecular Weight:** 74.12 g/mol

**Grade:** ACS Grade

**Purity / Concentration:** 99%

**Synonyms:** 2-Methyl-1-propanol, Isobutanol

### PRODUCT OVERVIEW

Isobutyl Alcohol 99% ACS Grade is a high-purity solvent essential for precise analytical and industrial applications. Featuring a 99% assay and exceptionally low impurity levels, such as 3 ppm residue on evaporation and 0.01% water content, it serves as a reliable component for laboratory analysis and chemical synthesis.

**Grade Significance:** ACS Grade signifies that this chemical meets the rigorous specifications established by the American Chemical Society, ensuring it is suitable for sensitive laboratory analysis where high purity and low contamination are mandatory.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

| PARAMETER                 | UNIT | TYPICAL | MIN  | MAX    | TEST METHOD       |
|---------------------------|------|---------|------|--------|-------------------|
| Assay Gc                  | %    | 99      | 98.5 | 99.5   | GC                |
| Color (APHA)              | APHA | 5       | —    | 10     | APHA              |
| Residue On Evaporation    | ppm  | 3       | —    | 10     | Evaporation       |
| Water Karl Fischer        | %    | 0.01    | 0    | 0.1    | Karl Fischer      |
| Acidity As Acetic         | ppm  | 10      | 0    | 20     | Titration         |
| Aldehydes As Acetaldehyde | ppm  | 0.015   | 0    | 0.05   | Spectrophotometry |
| Alkalinity                | —    | 0.0003  | —    | 0.0010 | Per specification |

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

### PHYSICAL & CHEMICAL PROPERTIES

|                                 |                                     |                         |                                                              |
|---------------------------------|-------------------------------------|-------------------------|--------------------------------------------------------------|
| <b>Appearance</b>               | Clear, colorless liquid             | <b>Odor</b>             | Characteristic alcohol odor                                  |
| <b>Form</b>                     | Liquid                              | <b>Boiling Point</b>    | 225 °F at 760 mmHg (NTP, 1992)                               |
| <b>Melting / Freezing Point</b> | -162 °F (NTP, 1992)                 | <b>Flash Point</b>      | 82 °F (NTP, 1992)                                            |
| <b>Specific Gravity</b>         | 0.802                               | <b>Solubility</b>       | Soluble in water, alcohol, ether, and other organic solvents |
| <b>Molecular Formula</b>        | C <sub>4</sub> H <sub>10</sub> O    | <b>Molecular Weight</b> | 74.12 g/mol                                                  |
| <b>Vapor Pressure (20°C)</b>    | 20 mmHg                             | <b>Viscosity (25°C)</b> | 0.54 cP                                                      |
| <b>Refractive Index (20°C)</b>  | 1.396                               | <b>Density (25°C)</b>   | 0.803 g/mL                                                   |
| <b>Decomposition Temp.</b>      | Not applicable under normal storage |                         |                                                              |

## APPLICATIONS

1. **Analytical Chemistry** — Functions as a critical mobile phase component in high-performance liquid chromatography to achieve precise separation of complex organic compounds.
2. **Paints and Coatings** — Utilized as a high-performance solvent that enhances the flow and leveling properties of specialized coating formulations.
3. **Pharmaceutical Manufacturing** — Acts as a versatile chemical intermediate for the synthesis of various active pharmaceutical ingredients and complex chemical compounds.
4. **Food and Beverage** — Employed in the delicate extraction process to isolate specific flavors and fragrances required for food-grade products.

## STORAGE & HANDLING

Due to its flash point of 82 °F, Isobutyl Alcohol is classified as a flammable liquid and must be stored in a cool, well-ventilated area away from ignition sources. Maintaining an airtight seal is critical to prevent contamination and evaporation, ensuring the product maintains its high ACS purity standards.

- Store in a cool, dry place away from heat sources and open flames.
- Use materials compatible with isobutyl alcohol, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- Wear appropriate personal protective equipment (PPE) including gloves and safety goggles.

## AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

## SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



### Hazard Statements:

- H226: Flammable liquid and vapour
- H315: Causes skin irritation
- H318: Causes serious eye damage
- H335: May cause respiratory irritation
- H336: May cause drowsiness or dizziness

**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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