

PRODUCT IDENTIFICATION



Product Name: Toluene
CAS Number: 108-88-3
Molecular Formula: C₇H₈
Molecular Weight: 92.14 g/mol
Grade: Technical Grade
Purity / Concentration: 99.5%
Synonyms: Methylbenzene, Toluol

PRODUCT OVERVIEW

Alliance Chemical provides high-purity Technical Grade Toluene, featuring a verified assay of 99.96% and low moisture content of 0.0097%. This clear, mobile liquid is an essential solvent and chemical precursor favored for its consistent performance in industrial and laboratory applications.

Grade Significance: Technical Grade signifies a balance between high purity and cost-effectiveness, making it suitable for general industrial, manufacturing, and laboratory applications where extreme reagent-grade specifications are not required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99.96	—	—	GC-FID
Color (APHA)	APHA	≤ 20 APHA	—	—	ASTM D1209
Refractive Index 20C	—	1.495	1.4919	1.4983	Refractometer @ 20°C
Specific Gravity (20°C)	g/mL	0.871	0.865	0.875	Hydrometer @ 20°C
Water Karl Fischer	%	0.0097	—	—	ASTM E203 / ISO 6296
Distillation Range Width	°C	0.7	—	1	ASTM D1078

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, mobile liquid	Odor	Sweet, aromatic odor
Form	Liquid	Boiling Point	231.1 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-139 °F (NTP, 1992)	Flash Point	40 °F (NTP, 1992)
Specific Gravity	0.867	Solubility	Low water solubility, excellent organic solvent
Molecular Formula	C ₇ H ₈	Molecular Weight	92.14 g/mol
Vapor Pressure (20°C)	28 mmHg	Viscosity (25°C)	0.59 cP
Refractive Index (20°C)	1.496	Density (25°C)	0.866 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Toluene serves as a reliable mobile phase component in reversed-phase high-performance liquid chromatography, facilitating the precise separation of complex organic compounds.
2. **Coatings and Paints** — Due to its excellent solvency properties, it is widely utilized as a key solvent in the formulation of high-quality paints and industrial coatings.
3. **Pharmaceutical Manufacturing** — This chemical acts as a critical precursor in the synthesis of various pharmaceutical ingredients and active compounds.
4. **Agrochemicals** — It is frequently employed in the synthesis of agrochemical products, helping to ensure the stability and efficacy of the final formulation.
5. **Chemical Processing** — Toluene is used extensively in liquid-liquid extraction processes, allowing for the efficient isolation of specific organic compounds from complex mixtures.

STORAGE & HANDLING

Proper storage is essential because Toluene is a highly flammable liquid with a flash point of 40 °F, posing a significant fire risk if exposed to heat or sparks. Additionally, its potential to cause respiratory and skin irritation necessitates a cool, well-ventilated, and tightly sealed environment to prevent hazardous vapor accumulation.

- Store in a cool, well-ventilated area away from heat sources and open flames.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper PPE, including gloves and goggles, are worn during handling.
- Maintain adequate ventilation 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:

- H225: Highly flammable liquid and vapour
- H304: May be fatal if swallowed and enters airways
- H315: Causes skin irritation
- H336: May cause drowsiness or dizziness
- H361d: Suspected of damaging the unborn child
- H373: May cause damage to organs through prolonged or repeated exposure
- H412: Harmful to aquatic life with long lasting 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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