

PRODUCT IDENTIFICATION



Product Name: n-Heptane 99% ACS

CAS Number: 142-82-5

Molecular Formula: C₇H₁₆

Molecular Weight: 100.20 g/mol

Grade: ACS Grade

Purity / Concentration: 99%

Synonyms: Heptane, n-Heptane

PRODUCT OVERVIEW

n-Heptane 99% ACS is a high-purity, clear, and colorless hydrocarbon solvent meticulously refined for rigorous laboratory and industrial standards. Featuring an assay of 99% and exceptionally low non-volatile residue of ≤ 0.0025%, this solvent provides the consistency required for precise analytical and manufacturing applications.

Grade Significance: ACS Grade indicates that this product meets the strict purity standards set by the American Chemical Society, ensuring it is suitable for use in demanding laboratory and analytical environments where quality control is paramount.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99	98.5	99.5	GC-FID
Color (APHA)	APHA	2	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.676	0.6422	0.687	Hydrometer @ 20°C
Non-Volatile Residue	%	≤ 0.0025 %	—	—	Residue on Ignition
Water Karl Fischer	%	ND	—	0.05	ASTM E203 / ISO 6296
Sulfate So4	ppm	≤ 5 ppm	—	—	Ion Chromatography
Distillation Range	°C	96.5	92	100.0	ASTM D1078
Sulfur	%	0.0015	—	0.0050	Per specification

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Form	Liquid
Boiling Point	209.1 °F at 760 mmHg (USCG, 1999)	Melting / Freezing Point	-131 °F (USCG, 1999)
Flash Point	25 °F (USCG, 1999)	Specific Gravity	0.684
Solubility	Insoluble in water, soluble in organic solvents	Molecular Formula	C ₇ H ₁₆
Molecular Weight	100.20 g/mol		

APPLICATIONS

1. **Analytical Chemistry** — Used as a high-purity solvent for chromatography and extraction processes where minimal background interference is required.
2. **Pharmaceutical Manufacturing** — Functions as a critical process solvent for the synthesis and purification of active pharmaceutical ingredients.
3. **Petroleum Industry** — Serves as a standard reference fuel and solvent for testing the octane rating and chemical properties of petroleum products.
4. **Laboratory Research** — Utilized as a non-polar solvent for organic synthesis, recrystallization, and general chemical analysis.
5. **Polymer Science** — Employed in the production and testing of polymers where precise solvent interactions are necessary for material integrity.

STORAGE & HANDLING

Due to its status as a highly flammable liquid with a flash point of 25 °F, n-Heptane must be stored in a cool, well-ventilated area away from all ignition sources. Proper containment prevents the accumulation of hazardous vapors and ensures the chemical remains free from environmental contaminants that could compromise its 99% purity.

- 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.
- Keep away from light to prevent degradation.
- Use appropriate personal protective equipment (PPE) including gloves and goggles.

AVAILABLE PACKAGING

- 1 Pint
- 1 Liter
- 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
- H410: Very toxic 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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