TECHNICAL DATA SHEET

n-Heptane 99% ACS

Revised: 07/22/2026

PRODUCT IDENTIFICATION

Product Name: n-Heptane 99% ACS
CAS Number: 142-82-5
Molecular Formula: C_7H_{16}
Molecular Weight: 100.20 g/mol
Grade: ACS Grade
Purity / Concentration: 99%
Synonyms: Heptane, n-Heptane

PRODUCT OVERVIEW

n-Heptane 99% ACS Grade is a high-purity solvent essential for rigorous laboratory and industrial applications. With a certified assay of 99.85% and exceptionally low impurity levels, including a water content of only 0.0020%, it provides the consistency required for precise analytical procedures.

Grade Significance: ACS Grade ensures the product meets the stringent quality standards set by the American Chemical Society, guaranteeing the purity and low impurity limits necessary for reliable laboratory results.

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 @ 25°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_7H_{16}
Molecular Weight	100.20 g/mol		

APPLICATIONS

1. **Pharmaceuticals** — Used as a high-purity solvent for the extraction and purification of active pharmaceutical ingredients. Its low residue profile ensures minimal contamination in final drug formulations.
2. **Analytical Chemistry** — Serves as a reliable solvent for chromatography and spectroscopy applications. The strict control over sulfur and metallic impurities prevents interference during sensitive testing.
3. **Petrochemicals** — Employed as a reference standard for determining the octane rating of fuels. Its precise chemical composition ensures accurate performance benchmarking in engine testing.
4. **Manufacturing** — Utilized as a high-performance cleaning agent and degreaser for precision components. Its rapid evaporation rate leaves behind virtually no residue after application.

STORAGE & HANDLING

Due to its low flash point of 4°C, n-Heptane must be stored in a cool, well-ventilated area away from all ignition sources to prevent fire hazards. Proper containment is critical to mitigate the risks of inhalation and aspiration, which can be fatal if the liquid enters the airways.

- 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 vapor [Danger Flammable liquids]
- H304: May be fatal if swallowed and enters airways [Danger Aspiration hazard]
- H315: Causes skin irritation [Warning Skin corrosion/irritation]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]
- H400: Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard]
- H410: Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com