

PRODUCT IDENTIFICATION



Product Name: n-Heptane 99% Technical

CAS Number: 142-82-5

Molecular Formula: C₇H₁₆

Molecular Weight: 100.20 g/mol

Grade: Technical

Purity / Concentration: 99%

Synonyms: Heptane, n-Heptane

PRODUCT OVERVIEW

Alliance Chemical's n-Heptane 99% Technical grade is a versatile solvent characterized by its high purity, with an assay of 99.3%. This colorless, volatile liquid is commonly used as a mobile phase in chromatography and for cleaning/degreasing applications. Its specific gravity is 0.684 g/mL at 20°C.

Grade Significance: Technical grade n-Heptane 99% indicates a level of purity suitable for industrial applications where trace impurities are not critical, offering a balance between cost-effectiveness and performance.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.3	99	—	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.684	0.683	0.685	ASTM D4052
Residue After Ignition	%	0.0005	—	0.0010	ASTM D482
Water Content	%	0.01	—	0.05	ASTM E203
Sulfur	ppm	1	—	5	ASTM D5623

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, volatile liquid	Odor	Characteristic hydrocarbon odor
Form	Liquid	Boiling Point	98°C (208°F)
Melting / Freezing Point	-91°C (-132°F)	Flash Point	-4°C (25°F)
Specific Gravity	0.684	Solubility	Insoluble in water, soluble in organic solvents
Molecular Formula	C ₇ H ₁₆	Molecular Weight	100.20 g/mol
Vapor Pressure (20°C)	18 mmHg	Viscosity (25°C)	0.39 cP
Refractive Index (20°C)	1.394	Density (25°C)	0.684 g/mL

APPLICATIONS

1. **Pharmaceutical** — n-Heptane's non-polar nature makes it an effective solvent for extracting active pharmaceutical ingredients from complex mixtures, ensuring high yields and purity of the desired compounds.
2. **Analytical Chemistry** — It serves as a standard reference material for calibrating analytical instruments used in hydrocarbon analysis, guaranteeing accurate and reliable measurements.
3. **Chromatography** — n-Heptane is a mobile phase component in reversed-phase chromatography, facilitating the separation and purification of organic compounds based on their hydrophobicity.
4. **Manufacturing** — This solvent is utilized for cleaning and degreasing metal parts in various manufacturing processes, removing oils, grease, and other contaminants to ensure optimal surface cleanliness.
5. **Research and Development** — n-Heptane is employed as a solvent and reagent in research settings for various chemical reactions and processes, owing to its high purity and consistent properties.
6. **Coatings and Adhesives** — It can be used as a solvent in the formulation of certain coatings and adhesives, helping to control viscosity and ensure proper application and drying characteristics.

STORAGE & HANDLING

Proper storage of n-Heptane 99% Technical is crucial due to its highly flammable nature. It should be stored in a cool, dry, well-ventilated area away from heat, sparks, open flames, and incompatible materials to prevent fire hazards and maintain product quality.

- Store in a cool, dry, 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.
- Ensure proper PPE, including gloves and goggles, are worn during handling.
- Keep away from open flames and sparks due to flammability.

AVAILABLE PACKAGING

- 1 Pint
- 1 Quart
- 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.

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