

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

n-Heptane 99% Technical is a high-purity, colorless, and volatile solvent widely utilized for its consistent non-polar properties. With an assay of 99.3% and exceptionally low moisture content of 0.01%, this product serves as a reliable standard for analytical applications and industrial processes.

Grade Significance: Technical grade indicates that this product meets high-purity standards suitable for industrial and laboratory use where reliability and minimal contaminants are required for consistent 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	%	ND	—	25	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

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	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
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 Manufacturing** — Utilized as a high-purity solvent for the efficient extraction and purification of active pharmaceutical ingredients.
2. **Analytical Chemistry** — Serves as a critical mobile phase component in reversed-phase chromatography and acts as a standard for calibrating hydrocarbon analysis instrumentation.
3. **Industrial Maintenance** — Functions as an effective cleaning and degreasing agent for precision metal parts, ensuring residue-free surfaces.
4. **Chemical Research** — Provides a consistent non-polar reaction medium for organic synthesis and complex molecular separation tasks.

STORAGE & HANDLING

Due to its status as a highly flammable liquid with a flash point of -4°C, n-Heptane must be stored in a cool, well-ventilated area away from ignition sources. Proper containment is essential to prevent the accumulation of vapors and to mitigate the risk of aspiration or skin irritation hazards.

- 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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