

SPECIALTY MILITARY

JP-10

High-Density Synthetic Missile / UAV Fuel

PRIMARY SPEC

MIL-DTL-87107

NATO CODE

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DOCUMENT

TDS · Rev. 2026-07

PRODUCT OVERVIEW

JP-10 is a high-density synthetic hydrocarbon fuel (exo-tetrahydrodicyclopentadiene) used in missiles, cruise weapons and high-performance UAV propulsion systems requiring maximum volumetric energy.

Typical applications: Missiles · Cruise weapons · High-performance UAVs · Specialty propulsion

KEY TECHNICAL PROPERTIES

PROPERTY	LIMIT / VALUE	TEST METHOD
Specification	MIL-DTL-87107	—
Chemical Composition	Exo-THDCPD ≥97 wt%	GC
Density at 15°C	0.937–0.951 g/mL	ASTM D4052
Flash Point (min)	54°C (130°F)	ASTM D56
Freezing Point (max)	−79°C (−110°F)	ASTM D2386
Net Heat of Combustion	≥139,400 BTU/gal	ASTM D4809
Viscosity at −40°C (max)	12 cSt	ASTM D445
Distillation Initial BP	170–200°C	ASTM D86
Distillation 90% (max)	210°C	ASTM D86
Copper Corrosion	Class 1	ASTM D130
Thermal Stability (JFTOT)	≥325°C	ASTM D3241
Total Sulfur (max)	3 mg/kg	ASTM D5453
Endo/Exo Isomer Ratio	Exo ≥97%	GC-MS
Color	Colorless to pale yellow	Visual

QUALITY & SUPPLY NOTES

Specialty high-energy density fuel. Handle per MIL packaging and export-control requirements. Full CoA and isomer analysis available.

Values shown are typical specification limits for guidance. Batch CoA prevails. Suat Fuels supplies certified product with full documentation at 2,200+ airports worldwide.