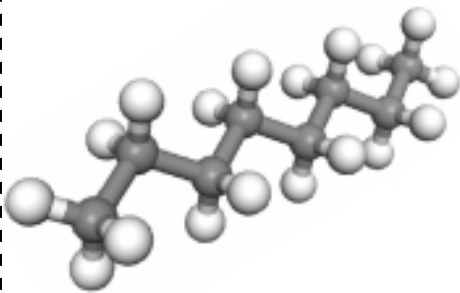


ALOHA™ CVD/ALD Materials



UHP n-OCTANE

n-Octane

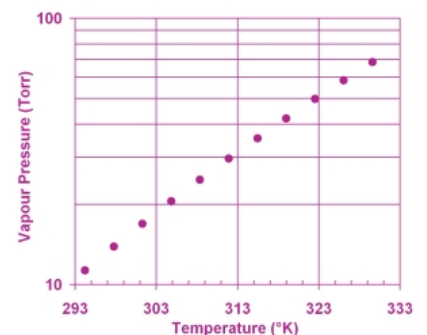
C_8H_{18}

CAS n° 111-65-9

- UHP-Octane is used either as a solvent to dilute or blend high-k precursors for usage in DLI vaporizers, and as a cleaning agent to purge canister connection points, precursor delivery lines and even the vaporizer in the process equipment.
- For both applications, absolute dryness is mandatory to prevent particle formation from the reaction of trace moisture with the precursor.
- ALOHA™ has developed a proprietary drying and filtration technology to ensure the lowest moisture level on the market today, and extremely low particle levels in our solvent-based precursor blends.
- ALOHA's UHP solvent product line includes Octane, Hexane, Ethanol, Toluene and other proprietary solutions when high volatility and very low viscosity are required.
- Like for most of the ALOHA advanced products, each UHP solvent canister is supplied with a BALAZS CofA ensuring strict compliance with the specifications. Please consult www.balazs.com for more information on Air Liquide's BALAZS analytical services.

Physical Chemical Properties

Physical Property	
Molecular Weight	114.23 g/mol
Physical State	Liquid
Colour	Colourless
Melting Point	< -57°C
Boiling point	127°C
Vapour Pressure	~ 9,6 torr @20°C
Heat of Vaporization	34 kJ/mol @400K
Specific Gravity	0.703 g/cm ³



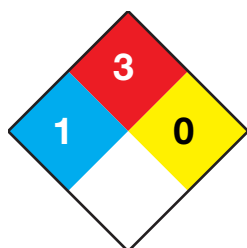
ALOHA Specifications

Parameter	Unit	Specification
Assay	%	>99%
Water Content	ppm	< 5
Water (typical)	ppm	< 1
Total Chloride	ppm	<=5
Particles	#/ml	< 20 @ 0,2 µm

Please consult ALOHA™ for detailed metals and additional specifications.



Hazard Rating



HMIS

Health: 1
Flammability: 3
Reactivity: 0

Please consult the ALOHA MSDS of UHP n-Octane for additional data.

All materials in contact with n-Octane should be compatible within hydrocarbons. Please consult ALOHA for detailed materials recommendation.

Applications

- UHP Octane, Hexane and other hydrocarbons are especially suitable to purge and dissolve a large variety of precursor families, the most common ones being alkylamino's, beta-diketonates, imidates, cyclopentadienyls, carbonyls and their combinations.

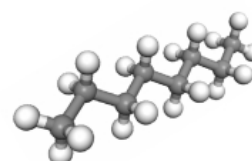
Packaging & Dispensing System

- UHP Octane can be packaged in a variety of canisters depending on the application.
- For cleaning / purging applications in Air Liquide's CANDI Liquid Dispense System equipped with the solvent purge option, the solvents can be packaged in 1,3L ampoules when integrated to the main enclosure, or in 2 or 5 Gallons, F66-1101 & F96-0740 SEMI compliant canisters for separate solvent feed and waste collection.
- Purge performances of high-k's with UHP solvents and the CANDI system are thoroughly documented for several representative precursors, and data are available from ALOHA.



Transport Information

- Proper shipping name: flammable Liquid, n.o.s. (n-octane)
- CAS n° 111-65-9
- UN Number: 1265
- Class/division: 3
- Hazard Labels required : Flammable Liquid



Air Liquide ALOHA is providing a complete advanced precursor solution. ALOHA portfolio covers low k, high k, barrier, metal gate, electrode, including some proprietary solutions for SiN, metals and High k. Manufacturing electronic devices with this material may be claimed in certain patents and seller hereby disclaims any liability as to the use of this material made by buyer.

For more information please contact: aloha@airliquide.com or your local Air Liquide representative.

