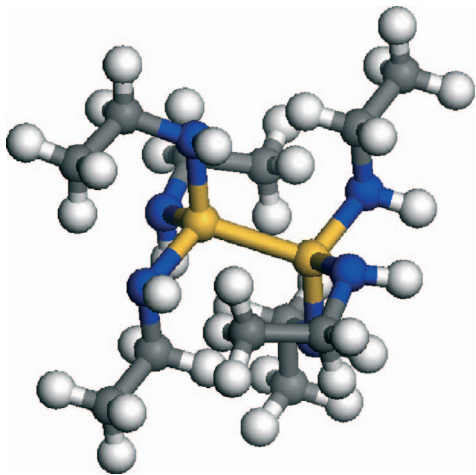


ALOHA



AHEAD™

AL Precursors global offer - SiN

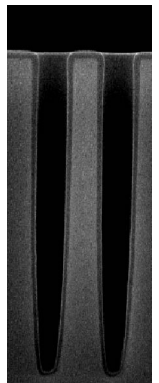
Hexakis(ethylamino)disilane

$\text{Si}_2(\text{NHC}_2\text{H}_5)_6$

CAS n° 532980-53-3

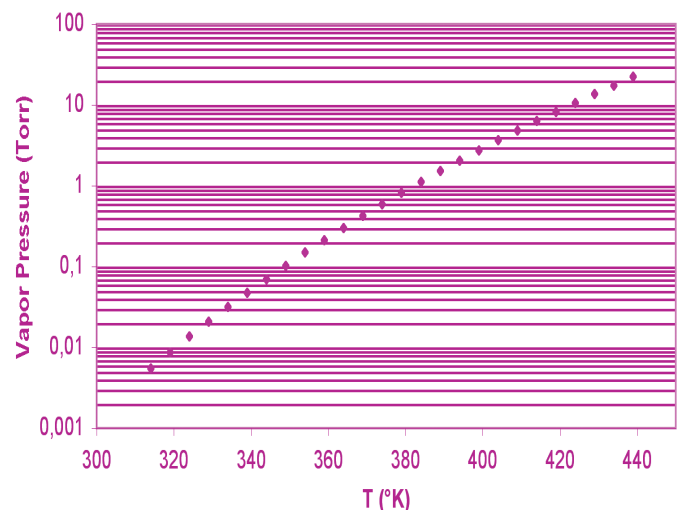
- AHEAD™ is the precursor of choice for the deposition of C-doped Silicon Nitride for spacers and capping layers for the 65 and 45 nm nodes. The extremely low thermal budget makes it compatible with NiSi contact layers.
- AHEAD™ exhibits much higher etching selectivity vs. oxide than any other existing solution for XLT deposited films, and impressive step coverage capabilities.

Main application : SiN Spacer and SiN Cap for the 65 and 45nm node technology



Physical-chemical properties

Physical Property	
Molecular Weight	320.6 g.mol ⁻¹
Physical State	Gas
Melting point	-7°C
Boiling Point	257°C (extrapolated)
Vapor Pressure	0.1 Torr at 80°C
Density	1 g.cm ⁻³



AL Specifications

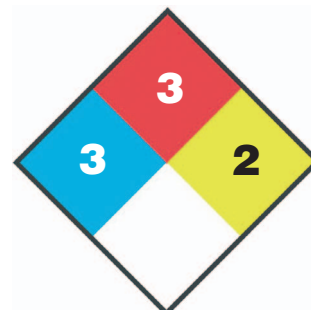
For detailed specifications, please contact aloha@airliquide.com



Photo: X. Renauld

Hazard Rating

HMIS: Health: 3 Flammability: 3 Reactivity: 2



Handling

- AHEAD™ is a colorless liquid that mildly reacts with water or moisture to generate silicon oxide and ethylamine.
- Recommended valve seat materials are PCTFE, PTFE, PFA.

Packaging & Dispensing system

- AHEAD™ is delivered using a liquid dispensing system such as the Air Liquide CANDI Solvent system. The relatively low pressure of this compound at room temperature makes the solvent purge module mandatory to properly clean the connection point of the canister and avoid the reaction of adsorbed traces of the product upon canister exchange.
- AHEAD™ is available in SEMI F66-1101 and F96-0704 compliant canisters of both standard 5 and 2 gallons (18,9L and 7,6L) sizes, as well as in smaller custom design canisters. To allow the installation on the CANDI Solvent, a special patent pending valve design allows a perfect and complete removal of AHEAD™ traces prior to disconnection.



Transport information

Proper shipping name: Flammable liquid, Corrosive
CAS n° 532980-53-3
UN Number: UN 2924
Class/division: 3
Package group: II
Label ADR: 3 , 8



Photo: X. Renauld

Air Liquide ALOHA is providing a complete advanced precursor solution. AL ALOHA portfolio covers low k, high k, barrier, metal gate, electrode, including some proprietary solutions for SiN, metals and High k.

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

"Certain aspects of Air Liquide technology may be covered by the following patents or their foreign equivalents: WO 03/045959 - WO 03/046253"

