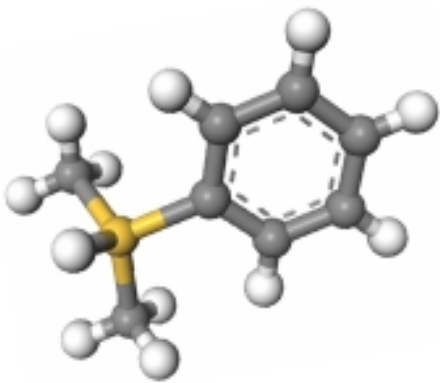


ALOHA™ CVD/ALD Materials



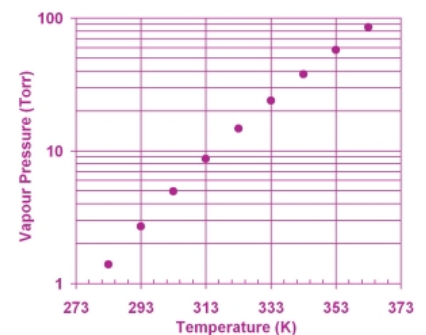
DMPS

Dimethylphenylsilane
 $(\text{CH}_3)_2\text{SiH}(\text{C}_6\text{H}_5)$, $\text{C}_8\text{H}_{12}\text{Si}$
 CAS n° 766-77-8
 EINECS n° 212-170-5

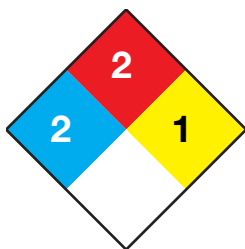
- DMPS, or Dimethylphenylsilane is used in the semiconductor industry for Plasma Enhanced Chemical Vapor Deposition (PECVD) of SiC:H, to deposit low k etch stops and barriers in advanced semiconductor devices. It is a colorless liquid in normal conditions.
- Semiconductor DMPS is obtained by a three-steps ultra-purification of low-grade DMPS. The raw DMPS itself is made from a Grignard reaction, and special care is taken in ALOHA's DMPS to avoid the formation of unwanted by-products that would be difficult to separate by distillation and to keep the chloride level at an extremely low level.
- Other main usage of industrial grade DMPS is in the chemical industry for catalyzed reduction of ketone, as a silylating agent, and as a reagent for enol ether synthesis.

Physical Chemical Properties

Physical Property	
Molecular Weight	136.3 g.mol ⁻¹
Physical State	Liquid
Melting Point	< -100°C
Boiling Point	158°C
Vapor Pressure	7 Torr @ 35°C
Gravity	0.889 g.cm ⁻³ @ 25°C
Flash point	38°C



Hazard Rating



HMIS

Health: 2
Flammability: 2
Reactivity: 1

Properties and Handling

- DMPS is intrinsically stable and does not thermally decompose under inert atmosphere. It is not soluble in water but soluble in most organic solvents.
- DMPS can be distributed in UHP stainless steel distribution systems, such as the Air Liquide CANDI-CAREN system.

Packaging & Dispensing System

- DMPS is typically delivered using a liquid dispensing system such as the CANDI /CAREN system. Air Liquide's dispense systems have distinctive, patent pending features, such as "last drop usage" function that does not require an internal liquid level sensing mechanism.
- DMPS is available in SEMI F66-1101 and F 96-0704 compliant canisters of 5 Gallons and 2 Gallons (18.9L and 7.6L) equipped with manually or pneumatically actuated valves. For bulk delivery, 55 Gallons canisters are also available along with Air Liquide's Bulk Refill system.



Transport Information

- Proper shipping name: Flammable Liquid, n.o.s. (dimethylphenylsilane).
- CAS n°: 766-77-8
- UN Number: 1993
- ADR Class/division: 3
- ADR Package group: III
- Label ADR/DOT: Label 3 (Flammable liquid)

