

# Product Data Sheet

## Coretec Cyclohexasilane™

**6x The Silicon For Superior Performance**

### Product Description

Coretec Cyclohexasilane ( $\text{Si}_6\text{H}_{12}$ ) is a higher order silane that is transported and stored as a liquid and can be processed as a liquid or gas.

### Applications

Coretec Cyclohexasilane is ideal for applications where purity, safety, fast deposition rate and low-temperature deposition of silicon and/or doped silicon (C, Ge, B, Co and P) are important, such as:

- Li-ion Battery
- Atomic Layer Deposition, PECVD, CVD, and plasma-based processes
- Silicon Quantum Dots
- Solar
- Printed Electronics

*Application sell sheets are available upon request.*

### Features & Benefits



**Liquid Transport  
and Storage**



**Non-Explosive**



**Fast Deposition  
Rate**



**Long Shelf Life**



**Low Temperature  
Transformation**

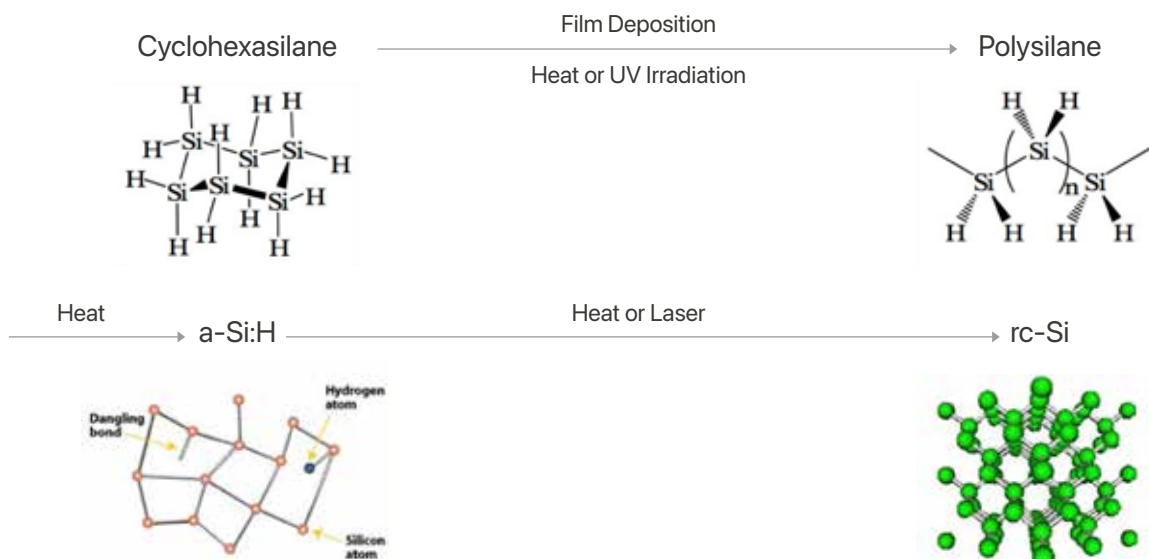


**Process as a  
Liquid or Gas**

### Technical Properties

Property	Typical Value
Apperance	Clear colorless liquid
Melting Point	18° C
Flammability	In air
Storage Time	2 Years at 0° C
Thermal Stability	100° C for 12 hours
H Loss	Rapid above 220° C
Vapor Pressure	<0.2 Torr at 20° C

## Transformation Of Cyclohexasilane ((CHS) / : Si<sub>6</sub>H<sub>12</sub>)



## Examples of Cyclohexasilane in Applications of Use

- Solution based synthesis of crystalline silicon from liquid silane through laser and chemical annealing (DOI/10.1021/qm300334p)\*
  - Aerosol assisted atmospheric pressure chemical vapor deposition silicon thin film (DOI/10.106/j.tdf.2015.05.069)\*
  - Low temperature colloidal synthesis of silicon nanorods (DOI/10.1021/acscchemmater5b02487)\*
  - Synthesis of silicon quantum dots (DOI/10.1039/c6tc01435f)\*
  - Silicon nanocrystals with band gap emission (DOI/10.1021/acsnano.9b09614)\*
- \*publication available upon request

## Storage and Shelf Life

Shelf life is two years at 0°C when stored under nitrogen.

## Safety

Before handling, read the product Material Safety Data Sheet (MSDS), which is available upon request.

## Notice

The information contained herein represents product knowledge at time of publication and is intended to serve as guidance on potential product development only. It is not a guarantee or warranty of product use, safety, or suitability for specific applications.