

MATERIAL SAFETY DATA SHEET

Revision Date: June 15, 2014

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Valid until Dec. 2015

SECTION 1 - Chemical Product and Company Identification

VESTA Si Europe AB
Industriomr. 3
SE-840 10 LJUNGAVERK
SWEDEN
Tel +46 691 32910
Fax +46 691 32230
E-mail info@vestasi.net
Web site: www.vestasi.net

FOR EMERGENCY SOURCE INFORMATION
CONTACT: +46 722 222 793 (mobile)

CAS Registry Number: 12033-89-5
CAS Name: Silicon Nitride

Substance: SILICON

TRADE NAME/ TRISILICON TETRANITRIDE; SILICON NITRIDE (Si₃N₄)
SICONIDE[®] (our trade mark)

Area of Use: Raw material when manufacturing engineering ceramics and other industrial applications.

SECTION 2 - Composition, Information on Ingredients

Component Substance: SILICON NITRIDE
Component Per Cent: Min. 98 %
CAS Registry Number: 12033-89-5
Component Substance: SILICON DIOXIDE
Component Per Cent: Max. 2 %
CAS Registry Number: 7631-86-9

SECTION 3 - Hazards Identification

Potential Health Effects Inhalation: May cause irritation when inhaling.

Points of Environmental Hazard: No information is available.

Points of Other Hazard: No information is available.

SECTION 4 - First Aid Measures

- Inhalation:** Remove from exposure area to fresh air immediately.
- Skin Contact:** Remove contaminated clothing and shoes. Wash with soap or mild detergent and large amounts of water.
- Eye Contact:** Wash eyes immediately with large amounts of water.
- Ingestion:** Rinse mouth with water.

SECTION 5 - Fire Fighting Measures

- Extinguishing Media:** Extinguish using agent suitable for type of surrounding fire
- Firefighting:** No acute hazard. Move container from fire area if possible. Avoid breathing vapours or dust; keep upwind
- Hazardous Combustion Products:** Thermal decomposition products may include toxic oxides of nitrogen.

SECTION 6 - Accidental Release Measures

- Occupational Spill:** For large spills, sweep up with a minimum dusting
- Personal protective Equipment:** If needed use protective inhalation and protective gloves

SECTION 7 - Handling and Storage

- Handling:** Take normal care
- Storage:** Keep product dry
- Unsuitable Material:** No special restrictions

SECTION 8 - Exposure Controls, Personal Protection

Inhalation:	If needed use suitable protective inhalation.
Skin Contact:	Protective clothes and protective gloves are recommended.
Eye Contact:	Wear dust-resistant safety goggles. Eyewash provided.
Hygiene Limiting Value:	5 mg/m ³ OSHA TWA (respirable dust).
Ventilation:	Provide local exhaust ventilation system to meet published exposure limits.

SECTION 9 - Physical and Chemical Properties

Description:	White to grey powder
Smell:	Possible to smell ammonia
Molecular Weight:	140.28
Molecular Formula:	Si ₃ N ₄
Physical State:	Solid
Melting Point:	1900°C - sublimation
Specific Gravity:	3.440 kg/m ³
Bulk Density:	600 - 1,000 kg/m ³ depending on milling grade
Water Solubility:	Insoluble
Explosion area in air:	Not applicable

SECTION 10 - Stability and Reactivity

Hazard Fragmentary:	Stable under normal temperatures and pressures.
Hazard Reactivity:	None
Conditions to Avoid:	Prevent dispersion of dust in air.
Hazardous Decomposition products:	Thermal decomposition products may include toxic oxides of nitrogen

SECTION 11 - Toxicological Information

Acute Toxicity: No information available
Health Effects:
Inhalation: Fine dust particles may irritate and dehydrate mucous membranes.
Skin contact: Dust may irritate and dehydrate skin.
Eye contact: Dust may irritate and cause dryness.
Ingestion: Dust may irritate and dehydrate mucous membranes.
Chronic effects: No chronic effects are known. Silicon Nitride powder is not known to be a reproductive toxin or mutagen.

SECTION 12 - Ecological Information

Ecological information is not yet available for this record

SECTION 13 - Disposal Considerations

The product is delivered in plastic or steel drum, lined with PE bag. Before sending the drum to recovery plant, take care that all the product is emptied. If needed, use water.

SECTION 14 - Transport Information

No other information is currently available for this record.

SECTION 15 - Regulatory Information

No other information is currently available for this record.

SECTION 16 - Other Information

No other information is currently available for this record.