

MATERAIL SAFTY DATA SHEET (MSDS)

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY		
1.1	Production	SCA-S89E SILANE
1.2	Generic Description:	Alkoxysilane
1.3	Profile:	Health
1.4	IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY	
	Manufacturer:	Nanjing Capatue Chemical Co., Ltd
	Address:	Block C Wenhui Building 19F, Caochang Road 101 Nanjing, Jiangsu 210000
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2. HAZARDS IDENTIFICATION	
<u>Acute Effects</u>	
Eye:	Irritation.
Ingestion:	Harmful or fatal, may cause eye damage and blindness
Inhalation:	Harmful
Special Harm	Combustible
Physical and Chemical	Ethanol may be formed by reaction with water or moisture
Dangerous:	
Hazard Category:	Danger
The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.	

3. COMPOSITION/INFORMATION ON INGREDIENTS		
<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
14814-09-6	≥ 95%	3-Mercaptopropyltriethoxysilane
The above components are hazardous as defined in 29 CFR 1910.1200.		

4. FIRST AID MEASURES

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4.1	Eye:	Rinse immediately with plenty of water for several minutes and get prompt medical attention.
4.2	Skin:	Put off contaminated clothing. Flush with alcohol or plenty of water. If serious, get prompt medical attention
4.3	Inhalation:	Remove from exposure immediately. If serious, get prompt medical attention
4.4	Oral:	Give patient two glasses of water, induce vomiting and get prompt medical attention.
4.5	Major Disease and Harm Effect	Moderately toxic if swallowed. Moderately by absorption through skin. Slight irritation if brief exposure, but long exposure may cause marked inflammatory effects
4.6	Notes to Physician:	Treatment should be based on blood ethanol levels and acid-base balance

5. FIRE FIGHTING MEASURES

5.1	Flash Point:	87 °C
5.2	Special Exposure Hazards:	Produce carbon monoxide, carbon dioxide, sulfur dioxide
5.3	Special Extinguishing procedure:	Due to its reaction with water, use remote spray monitors
5.4	Extinguishing Media:	Dry powder, CO ₂ (small fire), foam (large fire)
5.5	Special protection equipment:	Equipped with self-contained breathing

6. ACCIDENTAL RELEASE MEASURES

6.1	Containment/Clean up:	<p>Personal protection: Use rubber gloves, eye protection and protective clothing</p> <p>Environmental protection: Avoid heat, flames, sparks and other sources of ignition</p> <p>Methods for cleaning up: Absorb the leaking material with sand, wipe and wash with suds</p> <p>Note: See section 8 for Personal Protective Equipment for Spills. Call Capatue Chemical, if additional information is required.</p>
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7. HANDLING AND STORAGE

<p>Place it carefully, avoid contact with eye, skin. Wash after handling.</p> <p>Keep away from sources of ignition, keep container tightly closed and store in dry, cool and ventilated place</p>
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Component Exposure Limits</u>

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<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
14814-09-6	3-Mercaptopropyltriethoxysilane	
<u>Engineering Controls</u>		
Local Ventilation:	Recommended.	
General Ventilation:	Recommended.	
Control factor:		
• TWA/STEL/CEILING:		
Methanol: 200ppm (262mg/m ³) TWA (ACGIH) 250ppm (320mg/m ³) STEL (ACGIH)		
• Biotic Index :Not applicable		
<u>Personal Protective Equipment for Routine Handling</u>		
Eyes:	Eye protection	
Skin and Body	Common protective clothing	
Protection:		
Respiratory Protection:	Respirator	
Hand Protection	Rubber gloves	
Hygiene Procedures	Observe the common precautionary measures, contaminated clothes must be changed immediately, wash hands after work is completed	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Liquid
Color:	Colorless
Odor:	Mercapto odor
Specific Gravity @ 25°C:	0.98 ±0.020
Viscosity:	Not applicable
Freezing/Melting Point:	Not applicable
Boiling Point:	82~83°C(5mm/Hg)
Vapor Pressure @ 20°C:	<1.33hPa
Vapor Density:	.Heavier than air
Solubility in Water:	React with water slowly
pH:	Not applicable
Volatile Content:	Not applicable
Flash Point :	87°C
Autoignition Temperature:	Not applicable
Refractive Index	1.430±0.020(25°C)
Spontaneous Temperature	Not applicable

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Explosion Limits	Not applicable
Decomposition Temperature	Not applicable
Flammability Limits in Air:	Not applicable

Note: The above information is not intended for use in preparing product specifications. Contact Capatue Chemical before writing specifications.

10. STABILITY AND REACTIVITY

10.1	Chemical Stability:	Stable
10.2	Hazardous	None if used as directed
	Polymerization:	Not applicable
	Conditions to Avoid:	None
	Materials to Avoid:	Acids, water, strong oxidants

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, sulfur dioxide and oxide of silicon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Methanol: LD50 5628mg/kg(oral, rat), LD50 14200mg/kg(oral, rabbit), LD50 15800mg/kg(skin, rabbit)

3-Mercaptopropyltriethoxysilane: LD50 2830ul/kg(oral, rat), LD50 5660ul/kg(skin, rabbit)

Local effects: If swallowing, may cause nausea, abdominal pain, vomiting and headache.

Prolonged and widespread contact may result in kidney damage

If inhalation, may cause dizziness, drowsiness, disturbances of vision and tingling.

Sensitive: Skin and eye contact leads to slight irritation

Chronic: Not applicable

Exceptional effect: Not applicable

Mutagens

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
14814-09-6	≥ 95.0%	3-Mercaptopropyltriethoxysilane

12. ECOLOGICAL INFORMATION

Possibility of Environmental Impact/MOVE :

All available ecological data have been taken into account for the development of the hazard and precautionary information contained in this document.

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

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13. DISPOSAL CONSIDERATIONS

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No
State or local laws may impose additional regulatory requirements regarding disposal. Call Capatue Chemical, if additional information is required.

14. TRANSPORT INFORMATION

14.1	International Transport Regulation	Not applicable
14.2	United Nations Number(Un-No)	Not applicable
14.3	Internal Transport Regulation	Not applicable

Call Capatue Chemical if additional information is required.

15. REGULATORY INFORMATION

Apply regulation:	Not applicable
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16. OTHER INFORMATION

Prepared by: Nanjing Capatue Chemical Co., Ltd

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.