

11/27/2013

MATERIAL SAFETY DATA SHEET (MSDS)

Silane SCA-A67W

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1	Production	SCA-A67W
1.2	Generic Description:	Organo-Silane
1.3	Physical form:	Liquid
1.4	Color:	Colorless to yellowish
1.5	Odor:	Ester and ammonia-like
1.6	HMIS Profile	Health 1 Flammability 2 Instability/Reactivity 2
1.7	NFPA Profile:	Health 1 Flammability 2 Instability/Reactivity 2
1.8	Manufacturer:	Nanjing Capatue Chemical Co., Ltd
	Address:	No. 20 JiangJun Avenue, Jiangning Development Zone, Nanjing, Jiangsu Province, P. R. China P.C: 211100
	Telephone:	(+86-25)-8637 1193 Fax: (+86-25) 8637 1191-0
	24Hour Emergency Telephone:	(+86-25)-8637 1192
	Connect with:	Anhuanbu

2. HAZARDS IDENTIFICATION

Acute Effects

Eye:	Direct contact may cause mild irritation.
Skin:	May cause moderate irritation.
Inhalation:	Vapor may irritate nose and throat. Vapor overexposure may cause drowsiness.
Oral:	Overexposure by ingestion may cause effects similar to those listed under repeated exposure.

Prolonged/Repeated Exposure Effects

Skin:	No known applicable information.
Inhalation:	Product generates methyl alcohol which may cause blindness and damage to nervous system.
Oral:	Product generates methyl alcohol which may cause blindness and possibly death if swallowed.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

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.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
82985-35-1	> 92.0	Bis(trimethoxysilylpropyl)amine
67-56-1	0.1~1	Methanol
N/A	8~5	Related silane ester

The above components are hazardous as defined in 29 CFR 1910.1200. Additional methanol may be formed by reaction with moisture.

4. FIRST AID MEASURES

4.1	Eye:	Immediately flush with water for 15 minutes.
4.2	Skin:	Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
4.3	Inhalation:	Remove to fresh air. Get medical attention if ill effects persist.
4.4	Oral:	Get medical attention.
4.5	Notes to Physician:	Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

5.1	Flash Point:	> 100 °C (Closed Cup)
5.2	Auto ignition Temperature:	Not determined.
5.3	Flammability Limits in Air:	Not determined.
5.4	Extinguishing Media:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
5.5	Unusual Fire Hazards:	None

6. ACCIDENTAL RELEASE MEASURES

6.1	Containment/Clean up:	Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with
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suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call Capatue Chemical, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Avoid eye contact. Avoid skin contact. Do not breathe vapor. Keep container closed. Do not take internally.

Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
82985-35-1	Bis(trimethoxysilylpropyl)amine	Capatue Chemical guide: TWA 5 ppm, STEL 10 ppm. See methyl alcohol comments.

Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

Engineering Controls

Local Ventilation: Recommended.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR

Respirator: 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air

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	purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Do not breathe vapor. Keep container closed. Do not take internally. Use reasonable care.
Comments:	Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. When heated to temperatures above 150 degrees C in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.
Note:	These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry or contact the Capatue Chemical customer service group.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Liquid
Color:	Colorless to pale yellow
Odor:	Amino-like odor
Specific Gravity @ 25°C:	1.04
Viscosity:	6.5 cSt
Freezing/Melting Point:	Not determined.
Boiling Point:	> 285 °C
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Not determined.
pH:	Not determined.
Volatile Content:	Not determined
Flash Point :	100 °C (Closed Cup)
Auto ignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Note:	The above information is not intended for use in preparing product specifications. Contact Capatue

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Chemical before writing specifications.

10. STABILITY AND REACTIVITY

10.1	Chemical Stability:	Stable
10.2	Hazardous Polymerization:	Hazardous polymerization will not occur.
	Polymerization:	None
	Conditions to Avoid:	None
	Materials to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Component Toxicology Information

Bis(trimethoxysilylpropyl)amine was weakly mutagenic in the Ames test, mouse lymphoma assay, and an in vitro sister chromatid exchange test; however results of in vivo genotoxicity studies have shown mixed results. Repeated exposure of rats or rabbits to this material did not result in an increase in sister chromatid exchange, while single exposures of mice to a hydrolyzate of this material resulted in a significant increase in micronucleated polychromatic erythrocytes. The potential relevance to humans is not known; however, it is unlikely that this material presents a significant genotoxic hazard, in that it lacks any local tumorigenic response to the chronic recurrent application to mouse skin.

Special Hazard Information on Components

Mutagens

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
82985-35-1	> 92.0	Bis(trimethoxysilylpropyl)amine	Genetically active in IN VITRO and IN VIVO assay(s).

12. ECOLOGICAL INFORMATION

11/27/2013

MATERIAL SAFETY DATA SHEET (MSDS)

Silane SCA-A67W

Environmental Fate and Distribution

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

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.

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 DOT Road Shipment Information

Class 8
ADR/RID Labels 8
UN-No 2735
Packaging Group III
Proper Technical name(proper shipping name)
ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Bis(trimethoxysilylpropyl)amine

14.2 Ocean Shipment (IMDG)

Class 8
UN-No 2735
Packaging Group III
EmS F-A, S-F
Proper Technical name(proper shipping name)
ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Bis(trimethoxysilylpropyl)amine

14.3 Air Shipment (IATA)

Class 8

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UN-No	2735
Packaging Group	III
Proper Technical name(proper shipping name)	
ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Bis(trimethoxysilylpropyl)amine	
Call Capatue Chemical if additional information is required.	

15. REGULATORY INFORMATION

Labeling according to EC Directives

Symbol(s)	Xi	Irritant
	N	Dangerous for the environment
R-phrase(s)	R41	Risk of serious damage to eyes.
	R51	Toxic to aquatic organisms.
	R53	May cause long term adverse effect to aquatic environment
S-phrase(s)	S24	Avoid contact with skin.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S39	Wear eye/face protection.
	S61	Avoid release to the environment. Refer to special safety data sheets.

Inventories

Australia Inventory of Chemical Substances (AICS)	q (quantity restricted)
EU list of existing chemical substances	y (positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	t (temporary special case)
China Inventory of Existing Chemical Substances	y (positive listing)
Korea Existing Chemicals Inventory (KECI)	y (positive listing)
Canada DSL Inventory	q (quantity restricted)
Canada NDSL Inventory	y (positive listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)
TSCA list	y (positive listing)

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

11/27/2013

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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.