

MATERIAL SAFETY DATA SHEET

Sil EF189 DLC®

Date Revised: September 23, 2011

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1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Sil EF189 DLC, a thiocarboxylate-functional silane.

CHEMICAL NAME: Organoalkoxysilane on Calcium Carbonate

Company:



NATROCHEM, INC.
P.O. Box 1205
Savannah, GA 31402-1205

HMIS RATING	
HEALTH	1
FLAMMABILITY	1
REACTIVITY	1

Telephone Numbers:

Transportation Emergencies:

CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)

CHEMTREC (International): (202) 483-7616 (24 hours, call collect)

Product Information: (912) 236-4464 (EST, 8:00AM – 4:00PM M-F)

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS REGISTRY	PERCENT
Calcium Silicate	1344-95-2	~28
Organoalkoxysilane	Trade secret	<47
Polyhydric alcohol	Trade secret	<22
Related silanes & siloxanes	Trade secret	>4
Ethanol	64-17-5	<0.4

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Normal precautions should be observed in handling and storage. May cause eye irritation, swelling, and/or reddening. Causes skin irritation, local discomfort, local redness, and possible swelling. May cause allergic skin reaction. Prolonged and repeated exposure to excessive concentrations of this product's dust, or any nuisance dust, can cause chronic pulmonary disease. Dust contact with eyes may cause temporary scratchiness or redness. This product has not been classified as a carcinogen by NTP or IARC.

4. FIRST AID MEASURES

Swallowing: Unlikely in this form. If patient is fully conscious, give two glasses of water. Obtain medical attention.

Skin: Remove contaminated clothing. Wash skin with soap & water. If irritation persists, obtain medical attention.

Inhalation: Remove to fresh air. Obtain medical attention.

Eye Contact: Immediately flush eyes with water and continue washing for several minutes. Obtain medical attention.

Notes to physician: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

FLASH POINT (Method Used): >200°F (93°C)

FLAMMABLE LIMITS: N/D

AUTOIGNITION TEMPERATURE: N/D

SPECIAL FIRE FIGHTING PROCEDURES: Due to the initial water-silane reaction, use remote spray monitors or fight fire from behind barriers.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Self-contained breathing apparatus. Body covering protective clothing.

EXTINGUISHING MEDIA:

Suitable: Large fires:
- alcohol-type foam or universal-type foams
Small fires:
- CO₂
- dry chemical

Unsuitable: None.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None known.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear suitable protective equipment. Avoid contact with eyes and skin.

ENVIRONMENTAL PRECAUTIONS: Prevent runoff.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: MINIMIZE SPILL AREA. Vacuum spill material and place in closed plastic bags for disposal. Wear suitable protective clothing.

WASTE DISPOSAL METHOD: In a furnace, where permitted, under appropriate local, state, and federal regulations.

7. HANDLING AND STORAGE

HANDLING AND STORAGE: Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations. Do not swallow. Do not get in eyes, on skin, on clothing. Avoid breathing mist or vapor. Use with adequate ventilation. Wash thoroughly after handling. Store away from heat and flame. Keep container closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts. Use self-contained-breathing apparatus in high vapor concentrations.

VENTILATION: Provide explosion proof ventilation as required to control airborne dust levels. The sum total of all ingredients may emit vapors during normal processing. All possible health effects are not known and individual sensitivities will vary. Effective exhaust ventilation should always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation.

PROTECTIVE GLOVES: Impervious gloves to protect against contact with product.

Recommended order of use:

4H

Butyl

Neoprene

Nitrile (NBR)

PVC-coated

EYE PROTECTION: Safety goggles.

SKIN PROTECTION: Chemical protective clothing.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, eye wash station, safety shower.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION, Cont'd.

EXPOSURE LIMITS:

Component	Type	Value	Remark
Ethanol	TWA, OSHA	1,000.0 ppm	
	TWA, ACGIH	1,000.0 ppm	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Free-flowing powder.

Color: Off-white.

Odor: Sulfur.

OTHER PROPERTIES:

Boiling Point: >200°C STP

Specific Gravity: 1.278

Flash Point: >93°C (200°F)

Percent Volatiles: N/DA

Vapor Pressure (mm Hg) : <1

Evaporation Rate: <1

Vapor Density (Air = 1) : >1

Solubility in Water: Reacts slowly

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS: Acids. Bases. Water. Strong oxidizing agents.

HAZARDOUS COMBUSTION PRODUCTS: Burning can produce the following combustion products:

- o Oxides of carbon.
- o Oxides of sulfur.
- o Oxides of silicon.

Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

CONDITIONS TO AVOID- None known.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

11. TOXICOLOGICAL INFORMATION

SWALLOWING: Acute effects: No evidence of harmful effects from available information.

EFFECTS OF REPEATED OVEREXPOSURE: Prolonged or repeated exposure to excessive concentrations of this product dust or any nuisance dust can cause chronic pulmonary disease. Repeated contact with skin may cause a severe cumulative dermatitis. Long-term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. Repeated exposure to aerosols from undiluted or aqueous material may result in irritation and injury of the respiratory tract.

PRIMARY ROUTE OF ENTRY- Inhalation, eye, ingestion, dust contact with eyes.

EFFECTS OF EXPOSURE-

EYES- May cause mild irritation, excess redness and/or slight swelling of the conjunctiva, reddening of the sclera. Trace corneal injury is possible.

SKIN- Causes irritation, local discomfort, local redness, and possible swelling.

11. TOXICOLOGICAL INFORMATION, Cont'd.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Preexisting upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. Skin contact may aggravate an existing dermatitis.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

GENERAL: Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations.

14. TRANSPORTATION INFORMATION

DOT Classification: This product is not regulated by DOT.

Freight description road:CHEMICALS, NOIBN

IMDG Classification: This product is not regulated by IMDG.

ICAO Classification: This product is not regulated by ICAO.

15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQs) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are: NONE.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are: NONE.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: NONE.

Massachusetts Right-To-Know Substance List (MSL) – Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are: NONE.

Pennsylvania Right-To-Know Hazardous Substance List – Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are: NONE.

EPA Hazard Categories (SARA 311, 312): NONE

California Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

California SCAQMD Rule 443.1 VOCs

Volatile Organic Components (VOCs) = Substances with vapor pressure of ≥ 0.5 mmHG at 104° C (219.2° F).
NOT DETERMINED.

15. REGULATORY INFORMATION, Cont'd.**CHEMICAL INVENTORY**

United States: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION**RECOMMENDED USES AND RESTRICTIONS**

Please consult the product and/or application information bulletins for this product.

HMIS RATING

Health: 1	Flammability: 1	Reactivity: 1	PPI: X
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LEGEND

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	Minimal Hazard
1 (HMIS)	Slight Hazard
2 (HMIS)	Moderate Hazard
3 (HMIS)	Serious Hazard
4 (HMIS)	Severe Hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions.

Revision Note: Review and reissue

Prepared by: Craig Moore

N/A = Not applicable N/D = Not determined N/DA = No Data Available N/E = Not established

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