

MATERIAL SAFETY DATA SHEET

A172 DLC[®]

Date Revised: September 9, 2011

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SECTION 1 . PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: A172 DLC
CHEMICAL NAME: Vinyl-tris (2-methoxyethoxy) silane on calcium silicate

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

HMIS RATING	
HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

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)

SECTION 2 - COMPONENTS

COMPONENT NAME	CAS#
Vinyl-tris (2-methoxyethoxy) silane	1067-53-4
Synthetic Calcium Silicate	1344-95-2
Polysiloxanes	None established
Methyl Cellosolve (2-methoxyethonal)	109-86-4

SECTION 3 - PHYSICAL DATA

Boiling Point: >285° C	Specific Gravity: 1.203 (Calculated)
Vapor Pressure (mm Hg) : <5	Percent Volatiles: N/DA
Vapor Density (Air = 1) : >1	Evaporation Rate: <1

Solubility in Water: Reacts slowly
Appearance and Odor: Off-white, free flowing powder with ester odor.

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 92°C (198° F) (TCC)

FLAMMABLE LIMITS: N/A

AUTOIGNITION TEMPERATURE: N/A

EXTINGUISHING MEDIA: Combustible. Apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus when approaching fire from down wind, or when fighting fire in an enclosed area; oxides of silicon may be involved.

UNUSUAL FIRE & EXPLOSION HAZARDS: None.

SECTION 5 - HEALTH HAZARD DATA

HEALTH EFFECTS: Warning! Harmful if inhaled. Harmful if absorbed through skin. Combustible. May cause damage to blood-forming tissue. May cause damage to kidneys and testes. Causes dizziness, drowsiness and mental confusion. Contains methyl cellosolve (2-methoxyethanol), which causes birth defects in laboratory animals.

5 mg/m³ respirable nuisance dust, OSHA. 10 mg/m³ total nuisance dust, ACGIH. Prolonged or repeated exposure to excessive concentrations of this product dust or may nuisance dust can cause chronic pulmonary disease. 2-methoxyethanol: 25 ppm (skin) OSHA, 0.1 ppm (skin), OSHA (proposed), 5 ppm (skin), ACGIH. In laboratory animal studies of methyl cellosolve, birth defects and adverse effects on pregnancy have been observed. Union Carbide recommendations for methyl cellosolve: Maximum personal exposure limit in air 0.2 ppm (8-hour time weighted average). Maximum 15 minute excursion level 0.4 ppm (No more than 4 such excursions daily with minimum separation of 1 hour). Avoid all skin contact.

ACUTE TOXICITY DATA:

Acute Oral LD50

Acute Dermal LD50

Acute Inhalation LC50

PRIMARY ROUTE OF ENTRY- Inhalation, dust contact with the eyes, absorption, skin contact, ingestion.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No

IARC: No

OSHA: No

EFFECTS OF EXPOSURE-

EYES- Mildly irritating. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils. NO adverse effects are anticipated from silane content, based on available information.

SKIN- Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material. May cause minor irritation with itching and possible slight local redness.

INHALATION- Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Methyl cellosolve may cause headaches, dizziness, drowsiness, fatigue, nausea, vomiting, loss of coordination, loss of appetite, and tremors.

INGESTION- Moderately toxic. Causes headache, dizziness, nausea, vomiting, mental confusion, incoordination, prostration and death. Kidney damage has been described.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection. Pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. May aggravate asthma and inflammatory or fibrotic pulmonary disease.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD

EVALUATION: In laboratory inhalation studies, birth defects, increased fetal lethality, and delayed fetal development have been observed in offspring of female animals exposed to 2-methoxyethanol concentrations in air of 50 ppm and higher.

SECTION 6 - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Immediately rinse with clean water for 15 minutes. Retract eyelids often. Seek medical attention.

SKIN CONTACT: Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops.

INHALATION: Remove victim to fresh air.

SKIN: Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before re-use.

INGESTION: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

EYE: 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 the symptoms and the clinical conditions of the patient. Recovery from repeated exposure may be prolonged.

SECTION 7 - REACTIVITY DATA

STABILITY: Stable.

MATERIALS TO AVOID- Hydrofluoric acid, strong oxidizing agents. Moisture will cause product degradation.

CONDITIONS TO AVOID- Wash with soap and water before eating, drinking, smoking, or using toilet facilities.

Launder contaminated clothing before reuse. COMPOUNDING IN EPDM: There have been reports of explosions during the Banbury mixing cycle when A172 is compounded with EPDM. Refer to OSI Specialties Product Safety Bulletin, #OS-183, titled "Control of Compounding Silquest A-172 silane in EPDM Compositions for Wire and Cable".

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon when burned.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 8 - SPILL OR LEAK PROCEDURES

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. Avoid contact with powder and any vapors.

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

SECTION 9 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

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. Ventilation should be adequate to maintain ambient workplace atmosphere below the limits listed in Section V.

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

EYE PROTECTION: Safety goggles.

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

SECTION 10 - SPECIAL PRECAUTIONS

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.

OTHER PRECAUTIONS: Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse. **COMPOUNDING IN EPDM:** There have been reports of explosions occurring during the Banbury mixing cycle when A172 is compounded with EPDM. Refer to OSI Specialties Product Safety Bulletin, #OS-183, titled "Control of Compounding Silquest A-172 silane in EPDM Compositions for Wire and Cable".

DISPOSAL: Laboratory studies indicate that in highly dilute solution (ca. 10 ppm); this product may be biodegraded in a biological wastewater treatment system.

SECTION 11 - REGULATORY INFORMATION

CHEMICAL INVENTORIES:

Canada: The ingredients of this product are on the DSL.
 Europe: The ingredients of this product are on the EINECS inventory.
 United States: The ingredients of this product are on the TSCA inventory or are exempt.
 Australia: The organosilane ingredient in this product is listed or exempt on AICS.
 Japan: The organosilane ingredient in this product is listed or exempt on the ENCS list.
 Korea: The organosilane ingredient in this product is listed or exempt on the ECL.
 Philippines: The organosilane ingredient in this product is listed or exempt on PICCS.

OSHA: The component listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

INGREDIENT	AMOUNT	ACGIH (TLV)	OSHA (PEL)	UNITS
Calcium Silicate	28%	10	5	mg/m ³

SARA 313 TOXIC CHEMICALS:

This product contains the following toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR372:

CAS #	CHEMICAL NAME	PERCENT BY WEIGHT
109-86-4	Methyl cellosolve, or 2-Methoxyethanol	1.1%

This information must be included in all MSDS that are copied and distributed for this material.

Massachusetts Right-To-Know, Pennsylvania Right-To-Know and New Jersey Worker and Community Right-To-Know substances that must be identified:

CAS #	CHEMICAL NAME	PERCENT BY WEIGHT
109-86-4	Methyl cellosolve, 2-Methoxyethanol	1.1%

SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372

Name of Chemical	Hazard	Percent in Product
Calcium Silicate	Acute	28%

OTHER REGULATORY INFORMATION:

EPA Hazard Categories: Immediate Health Hazard, Delayed Health Hazard, Fire Hazard

TRANSPORTATION INFORMATION: Not regulated if shipped at temperatures under 100C (212F) or in a container less than 345 liters (119 gal.)

Proper Shipping Name: Combustible liquid N.O.S. (vinyl-tris(2-methoxy)silane)

UN Identification Number: NA1993 Packing group: III. Freight description road: Sizing, NOI.

SECTION 12 - OTHER INFORMATION

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

The information given in this MSDS was obtained from sources which we believe are reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, Natrochem, Inc. makes no warranty express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon.