

## Material Safety Data Sheet [Page 1 of 7]

### 1. CHEMICAL PRODUCT IDENTIFICATION



PRODUCT NAME: TerraDry™  
MSDS NUMBER: TD1-010409  
EFFECTIVE DATE: April 1, 2009  
TRADE NAME: TerraDry™  
CHEMICAL NAME: Organo-Silane

### 2. COMPOSITION

Chemical Characteristics - Organo-silane, a proprietary blend of sodium silicate and potassium silicate in water.

### 3. HAZARD IDENTIFICATION

Hazards classifications

HMIS rating (product as packaged):

Health: 3                      Fire: 0                      Reactivity: 0                      PPE: D

Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association. (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.)

Canadian WHMIS Classifications: E

Emergency overview and potential hazards

Signal Word: Danger

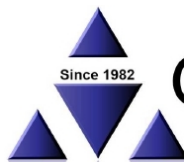
Physical Hazards: Corrosive liquid

Acute Health Effects:

Route if entry or possible contact: eyes, skin, inhalation (aerosol), ingestion

Eye Contact: causes severe eye burns

Skin contact: causes severe skin burns



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Inhalation: no acute toxic effects are expected. In case of aerosol formation: causes respiratory tract irritation. May cause respiratory tract burns. If inhaled lung damage can be expected.

Ingestion: Not expected in industrial use

Additional information on acute health effects: The toxicological evaluation is based on known effects of the active ingredients.

Further information:

Chronic health effects: none known

Medical conditions which may aggravated by exposure: unknown

Carcinogens/Reproductive toxins: There are no carcinogen ingredients present over 0.1% in this material. This material does not contain any reproductive toxins at or above OSHA or WMIS reportable levels.

### 4. FIRST AID

General Information: Get medical attention immediately. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of safety data sheet when you go for medical attention.

After inhalation: If inhaled as aerosol, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Eyes: Immediately holds eyelids apart and flush with water for at least 15 minutes. Seek immediate medical attention.

Skin: Immediately flush with water, for at least 15 minutes.

Ingested: Immediately drink water, do not induce vomiting. If vomiting does begin give additional fluids. Seek medical attention immediately. Designate the product.

Advice for the physician: Treat symptomatically. Possible damage to mucous membranes may be a contra-indication to pumping out the stomach.

### 5. FIRE SAFETY MEASURES

Flash point: not applicable

Boiling point: approx. 212°F (100°C) at 29.92 inches Hg

Lower explosion limit: not applicable

Upper explosion limit: not applicable

Ignition temperature:  $\geq 1112^{\circ}\text{F}$  ( $\geq 600^{\circ}\text{C}$ ) Fire and explosion hazards: none

Recommended extinguishing methods: Material does not burn. Use extinguishing methods appropriate to the source of the fire.

Unsuitable extinguishing methods: none known

Fire fighting procedure: Fire fighters should wear full [protective clothing including a self breathing apparatus. Cool endangered containers with water.

### 6. ACCIDENTAL RELEASE

Precautions: Keep unprotected persons away. Wear personal protection equipment. Avoid inhaling mists and vapors. Avoid contacts with skin and eyes.



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Containment: Prevent material from entering sewers and surface waters. Contain leaks using suitable material (e.g. absorbents). Spills of material which reach surface waters must be reported to the United States Coast Guard Response Center's toll free phone number (800) 424 8802

Methods for cleaning up: Take up mechanically and dispose of according to local/state/federal regulations. Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations.

### 7. HANDLING & STORAGE

#### Handling

Precautions for safe handling: Avoid contact with acids. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection)

Precautions against fire and explosion: none

#### Storage

Conditions for storage rooms and vessels: Protect against frost. Do not store in containers made of aluminum or other light metals.

Advice for storage of incompatible materials: none

Further information for storage: Keep container lid closed tightly

Minimum temperature allowed during storage and transportation 0 °C (32°F)

### 8. EXPOSURE CONTROL & PERSONAL PROTECTION

Respiratory protection: None required for most operations. If respiratory irritation is experienced, use an air-purifying respirator

Ventilation: Good general ventilation should be sufficient for most conditions.

Respiratory protection: Respiratory protection is not usually required. If spraying or other operations which generate an aerosol mist are conducted, respiratory protection for exposed personnel is recommended. A NIOSH approved air purifying respiratory equipped with universal multi-containment, multi-gas/vapor cartridges and at least P-99 solid/aerosol particulate filters is recommended if overexposure to dusts, mists or vapors could occur. If eye-irritating dust or vapors are present, a full face respirator should be worn.

Eye protection: Chemical goggles or full face shields

Skin protection: Chemically impervious gloves.

Other protective clothing or equipment: Additional skin protection, such as SARANEX coated Tyvek apron, over-sleeves, lab coat, coveralls, or protective suit should be worn if splashing could occur. Provide work area with emergency shower and eye bath.

General hygiene and protection measures: Do not breathe dust/vapor/mist/gas/aerosol. Avoid contact with eyes and skin. Do not eat or drink while handling. Wash thoroughly after handling



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### 9. PHYSICAL & CHEMICAL PROPERTIES

BOILING POINT:	212°F (100°C)
MELTING POINT:	N/A
FLASH POINT:	N/A
IGNITION TEMP:	1112°F (600°C)
LOWER EXPLOSION LIMIT:	not applicable
UPPER EXPLOSION LIMIT:	not applicable
SPECIFIC GRAVITY:	1.24 -1.28
SOLUBILITY/MISCIBILITY	Completely miscible
VAPOR PRESSURE:	12.75 mm Hg @ 32°F (0°C)
pH-VALUE	13 - 14
VISCOSITY:	50 Centipoises @ 77°F (25°C)
APPEARANCE:	liquid
ODOR:	slight
COLOR:	colorless

### 10. STABILITY & REACTIVITY

General information: If handled and stored in accordance with the standard industrial practices no hazardous reactions are known.

Conditions to avoid : none known

Materials to avoid: Reacts with acids. Reaction causes the formation of heat.

Hazardous Recomposition products : If handled and stored in accordance with the standard industrial practices no hazardous reactions are known.

### 11. TOXICOLOGICAL INFORMATION & EFFECTS OF OVEREXPOSURE

General Information: Toxicological testing has not been on this product.

### 12. ECOLOGICAL INFORMATION

Product does not bioaccumulate

ECOTOXICITY: Harmful effects through pH-shift.

Effects in sewage treatment plants (bacteria toxicity: respiration-reproduction inhibition):  
Do not introduce large amounts into purification plants. Normally neutralization is required before waste water is introduced into purification plants.

Other Harmful effects:

General Information: Prevent material from entering surface waters. No environmental problems expected if handled and treated in accordance with standard industrial practices and local regulations were applicable.



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### 13. DISPOSAL

RCRA Waste Classification: D002 (Corrosive) - This classification applies only to the material as it was originally produced.

Product disposal recommendation: Dispose of according to regulations by incineration in a special waste incinerator. Small quantities may be disposed of by incineration in an approved facility. Observe local/state/federal regulations. Incineration or deposit after solidification together with domestic waste is possible waste is possible. Observe local/state/federal regulations.

Package disposal recommendations: Completely discharge containers. Containers may be recycled or re-used. Observe local/state/federal regulations.

### 14. TRANSPORT INFORMATION

US D.O.T. and Canada TDG surface :

Valuation : Hazardous product

Proper shipping name : Corrosive liquid, basic, inorganic, n.o.s.

Technical name : Contains potassium silicate and potassium hydroxide

Class : 8

UN number : 3266

Label : corrosive

Other Information : Protect from freezing

Transport by sea :

Valuation : Hazardous product

Class : 8

UN number : 3266

Proper shipping name : Corrosive liquid, basic, inorganic, n.o.s.

Technical name : Contains potassium silicate and potassium hydroxide

Label : corrosive

EMS number : F-A, S-B

Marine Pollutant : no

Air Transport :

Valuation : Hazardous product

Class : 8

UN number : 3266

Shipping Name : Corrosive liquid, basic, inorganic, n.o.s.

### 15. REGULATIONS

US Federal Regulations:

TSCA inventory status and TSCA information: This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory



TSCA 12(b) Export Notification: This material does not contain any TSCA 12 (b) chemicals.

CERCLA Regulated Chemicals:

CAS no. 1310-58-3/Chemical-Potassium hydroxide/RG- 1000lbs/Upper limit wt%- 1.816

SARA 302 EHS Chemicals: This material does not contain any SARA extremely hazardous substances

SARA 311/312 Hazard class: Immediate (acute) health hazard

SARA 313 chemicals: This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants): This material does not contain any HAPS.

U.S. State Regulations:

California Proposition 65 Carcinogens: This material does not contain any chemicals known to the state of California to cause cancer.

California Proposition 65 Reproductive toxins: This material does not contain any chemicals known to the state of California to cause reproductive effects

Massachusetts substance list: 1310-58-3 Potassium Hydroxide

New Jersey right-to-know hazardous substance list: 1310-58-3 Potassium Hydroxide

Pennsylvania right-to-know hazardous substance list: 1310-58-3 Potassium Hydroxide

Canadian Regulations:

This product has been classified in accordance with the hazard criteria if the CPR and the MSDS contains all the information required by the CPR.

WHMIS hazard class: E

DSL status: This material or its components are listed on the Canadian Domestic Substance list.

Canadian Ingredient Disclosure list: 1310-58-3 Potassium Hydroxide

International Regulations

EU Hazard Symbols:



/C/Corrosive

EU Risk phrases: R35/Causes severe caustic burns

EU safety Phrases: S26/ In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36/37/39: Wear suitable protective clothing, gloves, and eye/face protection.

S45: In case of accident or you feel unwell, seek medical advice immediately (show the label where possible)

Details of International registration status:

Listed on or in accordance with the following inventories:

TSCA- USA

PICCS- Philippines

ENCS- Japan

ECL- Korea



DSL- Canada  
AICA- Australia  
EINECS- Europe  
IECSC- China  
HSNO- New Zealand

## 16. OTHER INFORMATION

This MSDS meets the requirements of the Federal OSHA Hazard Communication standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the sustainability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses with infringed valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

### Glossary of Terms:

ACGIH- American Conference of Industrial Hygienists  
DOT- Department of Transportation  
hPa- Hectopascals  
mPa\*s- Milli Pascal-Seconds  
OSHA- Occupational Safety and Health Administration  
PEL- Permissible Exposure Limit  
Ppm- Parts per million  
SARA- Superfund Amebdnepts and Reauthorization Act  
STEL- short Term Exposure Limit  
TSCA- Toxic Substances Control  
TWA- Time weighted Average  
WHMIS- Canadian Workplace Hazardous Material Identification System

### Flash Point Determination methods/common name:

ASTM D56- Tagliabue (Tag) closed cup  
ASTM D92, DIN 51376, ISO 2592/Cleavland open cup  
ASTM D93, DIN 51758, ISO 2719/ Pensky-Martens closed cup  
ASTM D3278, DIN 55680, ISO 3679/Setafish or rapid closed cup  
DIN 51755/Abel-Pensky closed cup

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