



Safety Data Sheet

Issue Date: 21-May-2015

Revision Date: 25-May-2015

Version 3

1. IDENTIFICATION

Product Identifier

Product Name Hydrox-Sil Concentrate

Other means of identification

SDS # 270458c (RT-003)

Product Code 1-270458-200, 1-270459-500, 1-270460-200

UN/ID No UN2924

Recommended use of the chemical and restrictions on use

Recommended Use Analytical Reagent—GC Derivatization; Silylation Reagent.

Details of the supplier of the safety data sheet

Supplier Address

Regis Technologies, Inc.
8210 N. Austin Avenue
Morton Grove, IL 60053

Emergency Telephone Number

Company Phone Number 847-967-6000; 800-323-8144 (toll free)

Email: cservice@registech.com

www.registech.com

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear to cloudy liquid

Physical State Liquid

Odor Irritating

Classification

Acute toxicity - Oral	Category 4	H302
Acute toxicity - Dermal	Category 4	H312
Acute toxicity - Inhalation (Dusts/Mists)	Category 4	H332
Skin corrosion/irritation	Category 1 Sub-category C	H314
Serious eye damage/eye irritation	Category 1	H314
Specific target organ toxicity (single exposure)	Category 3	H336
Flammable Liquids	Category 2	H225

Signal Word

Danger

Hazard Statements

Harmful if swallowed

Harmful in contact with skin

Harmful if inhaled

Causes severe skin burns and eye damage

May cause drowsiness or dizziness

Highly flammable liquid and vapor

**Precautionary Statements – Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge

Precautionary Statements – Response

Immediately call a poison center or doctor/physician
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a poison center or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Immediately call a poison center or doctor/physician
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Do not induce vomiting
 IN CASE OF FIRE: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements – Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Precautionary Statements – Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hexamethyldisilazane	999-97-3	66.7
Trimethylchlorosilane	75-77-4	33.3

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures**General Advice**

Provide this SDS to medical personnel for treatment.

Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage. Harmful in contact with skin. Harmful if inhaled. May cause drowsiness or dizziness. Harmful if swallowed.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Symptomatic and supportive care. No specific antidote. Treatment based on physician judgment in response to reactions of the patient.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder, or appropriate foam. Apply medium expansion (>30 :1) AFFF alcohol compatible foam. Application of foam will initially produce significant evolution of corrosive hydrochloric acid vapors.

Unsuitable Extinguishing Media Water may be ineffective in fighting fire.

Specific Hazards Arising from the Chemical

Highly flammable corrosive liquid and vapor. Do not put water directly on the fire due to vigorous reaction.--**hydrolyzes vigorously with water to produce corrosive hydrogen chloride gas that in contact with metal can produce flammable/explosive hydrogen gas**, and slowly hydrolyzes to produce ammonia that can react with hydrochloric gas to produce ammonium chloride salt. Water may be used to knock down corrosive vapor cloud down wind of fire and to keep fire exposed containers cool. Vapors are heavier than air, may travel long distances along the ground to ignition sources and flash back. Vapor-air mixtures are explosive above flash point, within above stated limits. **Chlorosilanes may cause re-ignition to occur. A fire guard should be posted during any clean up operation.** Static electricity may accumulate and ignite vapors. Use bonding and grounding or inert gas blanketing. Containers may build pressure or rupture when heated. Container explosion may occur under fire conditions. Water spray may be used to cool fire-exposed containers. Emits toxic fumes under fire conditions. At temperatures above 150°C in the presence of air, formaldehyde vapors can form. Formaldehyde is a potential cancer hazard, a respiratory and skin sensitizer, and an irritant to the eyes, nose, throat, skin and digestive tract.

Hazardous Combustion Products carbon oxides, silicon oxides, chlorine, hydrogen chloride, phosgene, nitrogen oxides, formaldehyde, ammonia, hexamethyldisiloxane, acetamide; May decompose on contact with water.

Sensitivity to Static Discharge Take precautionary measures against static discharge.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Eliminate all ignition sources. Use spark proof tools. Evacuate unnecessary people from area. Isolate spilled material. Ventilate area. Wear protective clothing to prevent contact with skin and eyes (lab coat, gloves, safety glasses). Wear NIOSH/MSHA approved respirator for organic/amine gas, dust, and mists to prevent inhalation. A fire guard should be posted during any clean up operation as silane materials may easily ignite.
Environmental Precautions	See Section 12 for additional Ecological Information. Do not allow material to enter drains or watercourses.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Contain and recover material when possible. Neutralize with suitable neutralizing agent for basic-amine solutions.
Methods for Clean-Up	Use chemically compatible spill pillows, or similar adsorbent material. Collect, seal in appropriate hazardous waste container, and hold for proper waste disposal. Wash spill site after material pickup is complete. Dispose of contents/container to an approved waste disposal plant.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing and eye/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Keep cool. Open containers cautiously. Do not use foam or plastic materials when handling this chemical as plastic may enhance the static potential due to their non-conductive nature.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Handle and store under nitrogen. Store locked up. Protect from moisture.
Incompatible Materials	Oxidizers--fire/explosion hazard. Acids (exothermic reactions), bases, oxygenated material--contact with these can generate HCl gas. Amines, alkalis, compounds with active hydrogen. Alcohols, acetone--violent reaction. Metals. Water, moisture, or humid air--violent reaction--hydrolyzing to corrosive ammonia and hydrochloric acid, that in contact with metals may produce flammable and/or corrosive hydrogen gas. Note: HMDS combined with pyridine N-oxide and tetrabutylammonium fluoride may explode.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Guidelines</u>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies
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Appropriate engineering controls

Engineering Controls	Showers. Eyewash stations. Mechanical exhaust required. Hood recommended. Fume scrubber.
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	Chemical safety eyewear.
Skin and Body Protection	Compatible chemical-resistant gloves: Rubber (e.g., natural rubber, neoprene, nitrile, etc.), Silver Shield®, Viton®, 4H®. Impervious protective clothing.
Respiratory Protection	NIOSH/MSHA approved respirator for organic/amine gas, dust, and mists.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Immediately remove contaminated clothing, as material may be absorbed through skin. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Liquid	Odor	Irritating
Appearance	Clear to cloudy liquid	Odor Threshold	Not determined
Color	Clear to cloudy		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	57.9 °C / 135 °F		
Flash Point	< 20 °C / 68 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Liquid- Not Applicable		
Upper Flammability Limits	16.3%		
Lower Flammability Limit	0.8%		
Vapor Pressure	N/A- however this is a mixture of volatile components		
Vapor Density	>1	(Air=1)	
Specific Gravity	0.793 g/cm ³		
Water Solubility	Yes—reacts vigorously -- Readily hydrolyzes to hydrochloric acid		
Solubility in other solvents	Toluene, ether, benzene, perchloroethylene, pyridine		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical Stability

Stable if stored under nitrogen and protected from moisture.

Possibility of Hazardous Reactions

Water, moisture, or humid air--violent reaction--hydrolyzing to corrosive ammonia and hydrochloric acid, that in contact with metals may produce flammable and/or corrosive hydrogen gas.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible Materials. Extreme heat, flame, and static discharge. Ignition sources.

Incompatible Materials

Oxidizers--fire/explosion hazard. Acids (exothermic reactions), bases, oxygenated material--contact with these can generate HCl gas. Amines, alkalies, compounds with active hydrogen. Alcohols, acetone--violent reaction. Metals. Water, moisture, or humid air--violent reaction--hydrolyzing to corrosive ammonia and hydrochloric acid, that in contact with metals may produce flammable and/or corrosive hydrogen gas. Note: HMDS combined with pyridine N-oxide and tetrabutylammonium fluoride may explode.

Hazardous Decomposition Products

carbon oxides, silicon oxides, chlorine, hydrogen chloride, phosgene, nitrogen oxides, formaldehyde, ammonia, hexamethyldisiloxane, acetamide; May decompose on contact with water.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns. Harmful in contact with skin.

Inhalation Harmful if inhaled.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hexamethyldisilazane 999-97-3	= 847 mg/kg (Rat)	= 710 µL/kg (Rabbit) = 540 mg/kg (Rabbit)	= 8700 mg/m ³ (Rat) 4 h
Trimethylchlorosilane 75-77-4	= 100 mg/kg (Rat)	= 1500 mg/kg (Rabbit)	= 12.9 mg/L (Rat) 1 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

STOT - single exposure May cause drowsiness or dizziness.

Numerical measures of toxicity

Product level testing not available

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product as a whole has not been tested for ecotoxicity.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hexamethyldisilazane 999-97-3		167: 96 h Pimephales promelas mg/L LC50 static		186: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Trimethylchlorosilane 75-77-4	3

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN2924
Proper Shipping Name	Flammable Liquids, Corrosive, n.o.s. (chlorotrimethylsilane, hexamethyldisilazane)
Hazard Class	3
Subsidiary Hazard Class	8
Packing Group	III

IATA

UN/ID No	UN2924
Proper Shipping Name	Flammable Liquids, Corrosive, n.o.s. (chlorotrimethylsilane, hexamethyldisilazane)
Hazard Class	3
Subsidiary Hazard Class	8
Packing Group	III

IMDG

UN/ID No	UN2924
Proper Shipping Name	Flammable Liquids, Corrosive, n.o.s. (chlorotrimethylsilane, hexamethyldisilazane)
Hazard Class	3
Subsidiary Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Hexamethyldisilazane	Present	X		Present		Present	X	Present	X	X
Trimethylchlorosilane	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Trimethylchlorosilane 75-77-4		1000 lb	

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hexamethyldisilazane 999-97-3	X		
Trimethylchlorosilane 75-77-4	X	X	X

16. OTHER INFORMATION

NFPA**Health Hazards****Flammability****Instability****Special Hazards**

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HMIS**Health Hazards****Flammability****Physical Hazards****Personal Protection**

3/ (/ means not chronic)

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Not determined

Issue Date: 21-May-2015

Revision Date: 25-May-2015

Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet