MATHESON
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Safety Data Sheet

Material Name: TRISILANE **SDS ID: 00227426**

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
TRISILANE
Synonyms
TRISILICOPROPANE; TRISILICON OCTAHYDRIDE; SILICOPROPANE; TRISILICANE; Si3H8
Chemical Family
hydrides, silanes
Product Use
Industrial
Restrictions on Use
None known.
Details of the supplier of the safety data sheet
MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920
General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Pyrophoric Liquids - Category 1
GHS Label Elements
Symbol(s)

Signal Word
Danger
Hazard Statement(s)
Catches fire spontaneously if exposed to air.
Precautionary Statement(s)
Prevention
Keep away from heat, sparks, open flame, and hot surfaces - No smoking.
Do not allow contact with air.
Wear protective gloves and eye/face protection.
Response
In case of fire, use media appropriate for extinction.
IF ON SKIN: Immerse in cool water/wrap in wet bandages.
Storage
Store contents under inert gas.
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7783-26-8	TRISILANE	100

Section 4 - FIRST AID MEASURES

Inhalation
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.
Skin
Remove contaminated clothing, jewelry, and shoes immediately. Immerse in cool water/wrap in wet bandages. Get immediate medical attention.
Eyes
Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.
Ingestion
If swallowed, get medical attention.
Most Important Symptoms/Effects
Acute
No information on significant adverse effects.
Delayed
No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media
regular dry chemical, dry sand, Lime, soda ash, Large fires: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn.
Unsuitable Extinguishing Media
Do not use water, foam or carbon dioxide.
Special Hazards Arising from the Chemical
May ignite on exposure to air. Severe fire hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.
Hazardous Combustion Products
Hydrogen, oxides of silicon
Fire Fighting Measures
Do not use water. Do not use foam. Move container from fire area if it can be done without risk. Do not attempt to extinguish fire unless flow of material can be stopped first. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Evacuate if fire gets out of control or containers are directly exposed to fire. Evacuation radius: 500 meters (1/3 mile). Consider downwind evacuation if material is leaking.
Special Protective Equipment and Precautions for Firefighters
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.
Methods and Materials for Containment and Cleaning Up

Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains, or confined areas. Do not get water directly on material. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Do not allow contact with air. Wear protective gloves and eye/face protection.

Conditions for Safe Storage, Including any Incompatibilities

Store contents under inert gas.

Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.

Incompatible Materials

combustible materials, halogenated compounds, halogens, oxidizing materials

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Glove Recommendations

Wear fire-resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid	**Physical State**	liquid
Odor	irritating odor	**Color**	colorless
Odor Threshold	Not available	**pH**	Not available
Melting Point	-117 °C (-179 °F)	**Boiling Point**	53 °C (127 °F)
Boiling Point Range	Not available	**Freezing point**	Not available

Evaporation Rate	Not available	**Flammability (solid, gas)**	Not available
Autoignition Temperature	<54 °C (<129 °F)	**Flash Point**	(Flammable)
Lower Explosive Limit	Not available	**Decomposition temperature**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	95.5 mmHg @ 0 °C
Vapor Density (air=1)	3.47	**Specific Gravity (water=1)**	0.74 - 0.743 at 0 °C
Water Solubility	(Decomposes)	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Kinematic viscosity**	Not available
Solubility (Other)	Not available	**Density**	Not available
Physical Form	liquid	**Molecular Formula**	H3-Si-Si-H2-Si-H3
Molecular Weight	92.32		

Section 10 - STABILITY AND REACTIVITY

Reactivity
May ignite on exposure to air.
Chemical Stability
May ignite on exposure to air.
Possibility of Hazardous Reactions
Will not polymerize.
Conditions to Avoid
Avoid contact with air. Keep dry. Keep out of water supplies and sewers.
Incompatible Materials
combustible materials, halogenated compounds, halogens, oxidizing materials
Hazardous decomposition products
Hydrogen, oxides of silicon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Inhalation
may cause irritation, headache, nausea
Skin Contact
may cause irritation. thermal burns
Eye Contact
may cause irritation. thermal burns
Ingestion
ingestion of harmful amounts is unlikely
Acute and Chronic Toxicity
Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.

Product Toxicity Data
Acute Toxicity Estimate
No data available.
Immediate Effects
No information on significant adverse effects
Delayed Effects
No information on significant adverse effects.
Irritation/Corrosivity Data
No animal testing data available for skin or eyes.
Respiratory Sensitization
No data available.
Dermal Sensitization
No data available.
Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA
Germ Cell Mutagenicity
No data available.
Tumorigenic Data
No data available
Reproductive Toxicity
No data available.
Specific Target Organ Toxicity - Single Exposure
No target organs identified.
Specific Target Organ Toxicity - Repeated Exposure
No target organs identified.
Aspiration hazard
No data available.
Medical Conditions Aggravated by Exposure
None known.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.
Persistence and Degradability
No information available for the product.
Bioaccumulative Potential
No information available for the product.
Mobility
No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262.
Hazardous Waste Number(s): D001. D003.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name: PYROPHORIC LIQUID, INORGANIC, N.O.S. , (Contains: TRISILANE)

Hazard Class: 4.2
UN/NA #: UN3194
Packing Group: I
Required Label(s): 4.2

IMDG Information:
Shipping Name: PYROPHORIC LIQUID, INORGANIC, N.O.S. , (Contains: TRISILANE)
Hazard Class: 4.2
UN#: UN3194
Packing Group: I
Required Label(s): 4.2

TDG Information:
Shipping Name: PYROPHORIC LIQUID, ORGANIC, N.O.S. , (Contains: TRISILANE)
Hazard Class: 4.2
UN#: UN2845
Packing Group: I
Required Label(s): 4.2
International Bulk Chemical Code
This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Pyrophoric
U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.
Not listed under California Proposition 65
Canada Regulations
Canadian WHMIS Ingredient Disclosure List (IDL)
The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.
Component Analysis - Inventory
TRISILANE (7783-26-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN - NCI (Draft)
Yes	NSL	No	No	No	No	No	No	No	No	No	No	No	Yes	No

Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 1 Fire: 4 Reactivity: 2
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
Summary of Changes

Safety Data Sheet

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Updated: 05/01/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NDSL – Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN NCI (Draft) - Vietnam National Chemicals Inventory (NCI) (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada) .

Other Information

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