

SAFETY DATA SHEET

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Date Revised: 7/8/15

Date Printed: 5/5/16

===== SECTION 1 - IDENTIFICATION =====

MANUFACTURER: SIERRA CORP/TK PRODUCTS EMERGENCY PHONE: 1-800-424-9300
ADDRESS : 11400 WEST 47TH STREET INFORMATION PHONE: (952)938-7223
 MINNETONKA, MN 55343 NAME OF PREPARER : Safety Director
PRODUCT NAME: TRI-SILANE TK-590-90
PRODUCT CODE: TK-590-90

===== SECTION 2 - HAZARDS IDENTIFICATION =====

HAZARD RISK CLASSIFICATION

SIGNAL WORD: DANGER

PICTOGRAM:

GHS02 - FLAME GHS07 - EXCLAMATION MARK GHS08 - HEALTH HAZARD

HAZARD CLASS

HAZARD CATEGORY

FLAMMABLE LIQUIDS	CATEGORY 3
SERIOUS EYE DAMAGE / EYE IRRITATION	CATEGORY 1
ASPIRATION HAZARD	CATEGORY 1
HAZARDOUS TO THE AQUATIC ENVIRONMENT LONG-TERM (CHRONIC)	CHRONIC 3

HAZARD STATEMENTS:

H226 Flammable liquid and vapor
H304 May be fatal if swallowed or enters airways
H319 Causes serious eye irritation.

PRECAUTIONARY STATEMENTS:

PREVENTION:

P210 Keep away from heat/hot surfaces/sparks/open flames and other
sources of ignition. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilation/lighting/handling
equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharge.
P280 Wear protective impervious gloves/ OSHA approved eye
protection/face protection.

RESPONSE:

P301+P310 If swallowed: Immediately call a Poison Center / doctor.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated
clothing. Rinse skin with water (or shower).
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor/ emergency responder.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use carbon dioxide (CO2), powder, alcohol-
resistant foam to extinguish.

STORAGE:

P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

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DISPOSAL:

P501 Store separately. Dispose of contents/ container in accordance with local/ regional/national /international regulations.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	WEIGHT	EXPOSURE LIMITS		
		PERCENT	OSHA PEL	ACGIH TLV	OTHER
Oligomeric Silane	34396-03-7	75-90	NOT ESTABLISHED		
* Aliphatic Hydrocarbon	64742-88-7	10-25	100 PPM	100 PPM	

* Chemical(s) that are chronic health hazards. Refer to section 3 for further information.

PRIMARY ROUTES OF EXPOSURE:

Skin contact, eye contact, and inhalation.

EFFECTS OF ACUTE EXPOSURE:

EYES: Contact with eyes may cause irritation including burning, watering, and redness.

SKIN: Contact may cause mild skin irritation including redness, burning, and drying and cracking of skin. Continued exposure may develop into dermatitis. Solvents can penetrate the skin and cause systematic effects similar to those under inhalation symptoms.

INHALATION: High vapor concentrations are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, asthma, drowsiness, unconsciousness, and other central nervous system effects, and possibly death.

INGESTION: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Small amounts aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

CHRONIC HEALTH EFFECTS:

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (Sometimes referred to as Solvent or Painter's Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal. Chronic exposure may also cause damage to the respiratory system, lungs, eyes, skin, gastrointestinal tract, liver, spleen and kidneys. Repeated skin contact may cause persistent irritation or dermatitis.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Conditions aggravated by exposure may include skin disorders, respiratory (asthma-like) disorders, and pre-existing liver or kidney conditions.

SECTION 4 - FIRST AID MEASURES

IF ON SKIN: Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use. If irritation develops and persists, seek medical attention.

IF IN EYES: Flush with large amounts of water for 15 minutes, lifting upper and lower lids occasionally. If symptoms persist, seek medical attention.

If SWALLOWED: Do not induce vomiting. Immediately administer 1-2 glasses of water and contact a physician, hospital emergency room, or poison control center for further advice. Keep person warm, quiet and seek immediate medical attention. Aspiration of material into lungs can cause severe lung damage. **VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.**

INHALATION: Move affected individual to fresh air. If breathing is difficult, qualified personnel should administer oxygen. If breathing has stopped give artificial respiration. If respiratory symptoms develop or persist, seek medical attention.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 102 F

METHOD USED: SFCC

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1%

UPPER: 6%

EXTINGUISHING MEDIA:

Foam, CO₂, or dry chemical is recommended. Water spray is recommended to cool or protect exposed materials or structures.

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SPECIAL FIREFIGHTING PROCEDURES:

Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment. Isolate danger area, keep unauthorized personnel out. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters. Carbon dioxide can displace oxygen, exercise caution when using CO2 in confined areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Vapors may be ignited by heat, sparks, flames, or other sources of ignition. Vapors are heavier than air and may travel considerable distances to a source of ignition where they may cause a flashback or explosion. If container is not properly cooled, it can rupture in the presence of excessive heat.

===== SECTION 6 - ACCIDENTAL RELEASE MEASURES =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Keep all sources of ignition and hot metal surfaces away from spill/release. Use explosion-proof non-sparking equipment. Stay upwind from area. Isolate danger and keep unauthorized personnel out. Stop source of release if possible with minimal risk. Wear appropriate protective equipment including respiratory protection. Prevent spill from entering sewers, storm drains, or any other unauthorized treatment drainage systems and natural waterways by diking ahead of the spill. Spilled material may be absorbed with an appropriate spill kit. Notify fire authorities and appropriate federal, state, and local agencies if required.

===== SECTION 7 - HANDLING AND STORAGE =====

HANDLING INFORMATION:

Employees who come in contact with this material must be trained in accordance to 1910.1200 of the Hazard Communication Standard.

Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Static charge can accumulate by flow or agitation. Ignition can occur by static discharge. The use of explosion proof equipment is recommended and may be required. The use of respiratory protection is advised when concentrations exceed any established exposure limits and in confined spaces. Use good industrial and personal hygiene practice, wash thoroughly after handling, and do not wear contaminated clothing.

STORAGE INFORMATION:

Keep containers tightly closed. Use and store material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post "No smoking or open flame" sign. Store only in approved containers. Keep away from incompatible materials (see section 10). Protect containers against physical damage. Indoor storage should meet OSHA standards and appropriate fire codes.

OTHER PRECAUTIONS:

"Empty" containers retain residue, liquid and vapor, and may be dangerous. Do not cut, weld, pressurize, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause severe personal injury or death. All containers should be disposed of in an environmentally safe manner in accordance with all government regulations.

===== SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION =====

RESPIRATORY PROTECTION:

Engineering or administrative controls should be implemented to reduce exposure. A NIOSH/MSHA approved respirator with an organic vapor cartridge should be used under conditions where airborne concentrations are expected to exceed exposure limits (See Section 3). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

VENTILATION:

If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used.

PROTECTIVE GLOVES:

Prevent prolonged or repeated contact by wearing gloves impervious to solvents and other appropriate protective clothing. Launder contaminated clothing before reuse.

EYE PROTECTION:

Wear safety glasses to reduce eye contact potential. Chemical safety goggles (ANSI Z87.1 or approved equivalent) are

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appropriate if splashing is likely. Eye washes must be available where eye contact can occur.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A source of clean water should be available for flushing eyes and skin. Showers should be available if larger spills are possible.

WORK/HYGIENIC PRACTICES:

Efforts should be made to minimize contact and spills. Always wash hands before eating, drinking, or smoking. Clean up spills promptly. Follow OSHA and company guidelines.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Clear(Water white)

ODOR: Hydrocarbon odor

SOLUBILITY IN WATER: Insoluble/Negligible

SPECIFIC GRAVITY (H₂O=1): .86

VAPOR DENSITY: Heavier than air.

BOILING RANGE: 194 F - 315 F

EVAPORATION RATE: Slower than nBuAc

COATING V.O.C.: 398 g/l (3.32 lb/gal)

SECTION 10 - STABILITY AND REACTIVITY DATA

STABILITY:

Stable under normal conditions and handling.

CONDITIONS TO AVOID:

All possible sources of ignition.

INCOMPATIBILITY (MATERIALS TO AVOID):

Avoid exposure to strong oxidizing agents and reducing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Combustion may liberate toxic byproducts such as carbon dioxide, carbon monoxide, various oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

SENSITIZATION:

None known.

CARCINOGENICITY:

There is no data available to indicate any components present at greater than 0.1% may present a carcinogenic hazard.

REPRODUCTIVE TOXICITY:

There is no data available to indicate any components present at greater than 0.1% may present reproductive toxicity.

TERATOGENICITY (BIRTH DEFECTS):

There is no data available to indicate any components present at greater than 0.1% may cause birth defects.

MUTAGENICITY:

There is no data to indicate that any component present at greater than 0.1% will alter DNA.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA:

Although no information is available for this specific product mixture, individual components may by themselves may have ecological affects.

SECTION 13 - DISPOSAL CONSIDERATIONS

This product is considered a RCRA hazardous waste due to the characteristic(s) of D001 (ignitability). Waste is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment standards. Consult state and local regulations to determine whether they are more stringent than the federal requirements.

Container contents should be completely used and containers empty prior to discarding. Container rinsate could be considered a RCRA hazardous waste and must be discarded in compliance with all applicable regulations. Larger empty containers, such as drums, should be returned to a professional drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

SECTION 14 - TRANSPORT INFORMATION

SHIPPING NAME:

Combustible liquid. Not regulated in containers 119 gallons (450 liters) or less, and ground travel. (For containers greater than 119 gallons, vessels, international shipments, or Air: UN1139, Coating Solution, 3, III)

SECTION 15 - REGULATORY INFORMATION

All ingredients of this product are listed, or are excluded from listing, on the US Toxic Substances Control Act (TSCA) chemical substance inventory.

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This product does not contain a chemical subject to the reporting requirements of SARA Title III, Section 313 (40CFR 372) above de minimis concentrations.

STATE SPECIFIC REQUIREMENTS:

This product does not contain a chemical known to the state of California to cause cancer, birth defects or reproductive harm, subject to the requirements of California Proposition 65.

STATE LISTED COMPONENTS	CAS NUMBER	STATE CODE	.
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=====SECTION 16 - OTHER INFORMATION=====

REVISION DATE: 07/08/15

HMIS CODES: H	F	R	P
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