SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. Identification

Product identifier: Dynasylan® 1505
Chemical name:
3-(diethoxymethylsilyl)propylamine

Other means of identification
CAS Number: 3179-76-8

Recommended restrictions

Recommended use: For industrial use Coupling agent Crosslinking agents Surface modifier
Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name	:	Evonik Corporation 2 Turner Place Piscataway, NJ 08854 USA
Telephone	:	+1 732 981 5000
E-mail	:	product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health Emergency	:	+1 800 424 9300 (CHEMTREC - US & CANADA) 800 681 9531 (CHEMTREC MEXICO) +1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 4

Health Hazards

Skin Corrosion/Irritation	Category 1B
Serious Eye Damage/Eye Irritation	Category 1

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:

Combustible liquid.
Causes severe skin burns and eye damage.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. Specific treatment (see supplemental first aid instructions on this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

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

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:
3-(diethoxymethylsilyl)propylamine

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
3-(diethoxymethylsilyl)propylamine		3179-76-8	>90 - <=100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Remove contaminated or saturated clothing immediately and follow safe disposal procedures.

Inhalation:	If aerosol or mists are formed: Possible discomfort: severe irritation of mucous lining (nose, throat, eyes), cough, sneezing, flow of tears Move to fresh air. If breathing difficulties occur: Keep patient half sitting with upper body raised. Get medical attention immediately.
Skin Contact:	Immediately wash with soap and water for at least fifteen minutes. Remove contaminated clothing and shoes. Obtain medical attention. Thoroughly wash clothing and shoes before reuse.
Eye contact:	With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. Continue rinsing process with eye rinsing solution. Protect unharmed eye. Call ambulance. (Cue: caustic burn of the eyes) Immediate further treatment in ophthalmic hospital/ ophthalmologist. Continue rinsing eye until arrival at ophthalmic hospital.
Ingestion:	Do NOT induce vomiting. Only when patient fully conscious: Have the mouth rinsed with water. Have patient drink plenty of water in small sips. Notify ambulance immediately (keyword: chemical burn).
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	No data available.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	If substance has been swallowed, apply therapy for chemical burn. Early endoscopy is recommended in order to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, suck away left over substances.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media:	High volume water jet.
Special hazards arising from the substance or mixture:	Hazardous fumes in fires, specific to the product: Nitrogen OxidesCombustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.Containers can build up pressure if exposed to heat (fire). Cool with water spray.

Special protective equipment for fire-fighters:	As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Ensure adequate ventilation.
Accidental release measures:	Remove sources of ignition and ventilate area. Run off may create fire or explosion hazard in sewer. Assure sufficient ventilation.
Methods and material for containment and cleaning up:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Environmental Precautions:	Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	Provide good ventilation or extraction.
Safe handling advice:	Provide good ventilation or extraction.Handle in accordance with good industrial hygiene and safety practice. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Use protective clothing / face shield if necessary. Do not breathe in vapours or aerosols.Avoid contact with eyes, skin, and clothing. For personal protection see section 8. Vapors may spread long distances and travel to areas away from the work site before igniting or flashing back to the vapor source. Keep away from heat, sparks, flames and other sources of ignition. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks. The user must be sure to dissipate static charge by careful

bonding and grounding of all equipment and personnel involved in fluid transfer with continuity checks to prove effectiveness. Additional precautions against fire and explosion are the use of inert gas to purge vapor space; dip-pipes while filling vessels, especially lined vessels; grounded tank level floats; reduced flow velocity; self-closing valves on transfer lines and flame arrestors in vent lines.
Additional guidance on fire and explosion protection may be found in various consensus standards, including NFPA 30, 69 and 77 and API 2003 as well as OSHA regulation 29CFR1910.106.
Follow all SDS/label precautions even after container is emptied because it may retain product residues.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls Provide good ventilation or extraction.

Individual protection measures, such as personal protective equipment

Eye/face protection: Use chemical splash goggles or face shield.

Skin Protection

Hand Protection: Material: Butyl rubber.
Break-through time: >= 480 min
Material: Fluorinated rubber (Viton)
Break-through time: >= 480 min
Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use., Selection of protective gloves to meet the requirements of specific workplaces., The suitability for a specific workplace should be discussed with the producers of the protective gloves., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Use impermeable gloves.

Skin and Body Protection:	When handling larger quantities: chemical protective suit, disposable protective suit (Solvent-resistant) Safety showers and eye showers should be easily accessible. In order to determine further specifications applicable to the personal protection equipment, a hazard assessment according to the OSHA standards (29 CFR 1910.132) for personal protection equipment (PPE) is recommended before the product is used.
Respiratory Protection:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
Hygiene measures:	When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	colorless to yellowish
Odor:	amine-like
Odor Threshold:	No data available.
Freezing point:	< -292 °F/< -180 °C (OECD 102)
Boiling Point:	396 °F/202 °C (1,013.25 hPa) (DSC)
Flammability:	No data available.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	190 °F/88 °C (DIN EN ISO 2719)
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	11 (20 g/l, 20 °C)
Viscosity	
Dynamic viscosity:	2 mPa.s (68 °F/20 °C, DIN 53015)
Kinematic viscosity:	1.78 mm2/s (68 °F/20 °C, OECD 114) 1.25 mm2/s (104 °F/40 °C, OECD 114)
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	not miscible decomposition by hydrolysis
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	2.5 (QSAR)

Vapor pressure:	0.2 - 0.3 hPa (68 °F/20 °C) (OECD 104) static method
Relative density:	No data available.
Density:	0.9136 g/cm3 (68 °F/20 °C) (OECD 109)
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Explosive properties:	Not explosive Vapours may form explosive mixtures with air.
Minimum ignition temperature:	509 °F/265 °C (DIN 51794)
Peroxides:	Not applicable

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Exothermic reaction with: acids
Conditions to avoid:	Protect from moisture. Keep away from heat and sources of ignition.
Incompatible Materials:	Water. Acids.
Hazardous Decomposition Products:	Ethanol in case of hydrolysis. Alcohol formed by hydrolysis lowers the flash point of the product.

11. Toxicological information

Information on toxicological effects

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Acute toxicity (list all possible routes of exposure)

Oral
Product: LD 50 (Rat, Female, Male): > 2,000 mg/kg (OECD 401)

Dermal
Product: LD 50 (Rabbit, Female): 2,293 mg/kg (OECD 402)

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: NOAEL (Rat(Female, Male), Oral, 90 day, daily): 200 mg/kg LOAEL (Rat(Female, Male), Oral, 90 day, daily): 600 mg/kg (Target Organ(s):

stomach, Liver) (analogy)

Skin Corrosion/Irritation
Product: Corrosive. OECD 404 (Rabbit, < 1 h):

Serious Eye Damage/Eye Irritation
Product: Risk of serious damage to eyes. Rabbit:

Respiratory or Skin Sensitization
Product: No data due to skin-corrosive action

Carcinogenicity
Product: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

In vitro
Product: gene mutation test (OECD 471): negative;
Chromosomal aberration (OECD 473): positive;
gene mutation test (OECD 476): negative; (analogy);

In vivo
Product: Micronucleus test (OECD 474) Intraperitoneal (Mouse, Female, Male): negative; (analogy)

Reproductive toxicity
Product: No data available.
Components:

3-(diethoxymethylsilyl)propylamine	no evidence of reproductiontoxic properties

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No evidence of aspiration toxicity

Information on health hazards

Other hazards
Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: LC 50 (Danio rerio, 96 h): > 934 mg/l (analogy)

Aquatic Invertebrates
Product: EC 50 (Daphnia magna, 48 h): 331 mg/l (analogy)

Toxicity to Aquatic Plants
Product: EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 1,000 mg/l (OECD 201) (analogy)

Toxicity to microorganisms
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Toxicity to microorganisms
Product: No data available.

Persistence and Degradability

Biodegradation
Product: 67 % (28 d, (DOC; Die Away test - 79/831/EEC part C.4-A)) (analogy), Not readily degradable.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)
Product: not bioaccumulative

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: 2.5 20 °C (QSAR)

Mobility in soil:

Product Adsorption on the floor: low.

Results of PBT and vPvB assessment:

Product No data available.

Other adverse effects:

Other hazards

Product: The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. Disposal considerations

Disposal methods: Waste must be disposed of in accordance with federal, provincial, state and local regulations. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH AN ELECTRIC OR GAS TORCH.

Contaminated Packaging: Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label. Incorrect disposal or reuse of this container is illegal and can be dangerous. Other countries: observe the national regulations.

14. Transport information

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3267
Proper shipping name	:	Corrosive liquid, basic, organic, n.o.s. (3-Aminopropyl-methyl-diethoxysilane)
Class	:	8
Packing group	:	II
Labels	:	8
ERG Code	:	153
Marine pollutant	:	no

International Regulations

IATA-DGR

UN/ID No.	:	UN 3267
Proper shipping name	:	Corrosive liquid, basic, organic, n.o.s. (3-Aminopropyl-methyl-diethoxysilane)
Class	:	8
Packing group	:	II
Labels	:	8
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851
Remarks	:	ERG-Code 8L

IMDG-Code

UN number or ID number	:	UN 3267
Proper shipping name	:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (3-Aminopropyl-methyl-diethoxysilane)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no
Remarks	:	SW2 - Clear of living quarters.Keep separate from acids.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
Reportable Quantity not reasonably exceeded.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Flammable (gases, aerosols, liquids, or solids), Skin Corrosion or Irritation, Serious eye damage or eye irritation

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
Reportable Quantity not reasonably exceeded.

US State Regulations

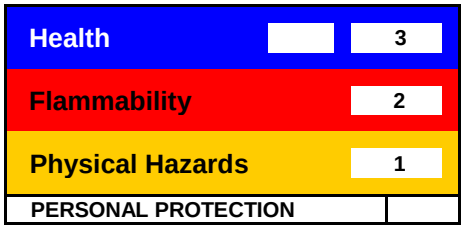
US. California Proposition 65

WARNING: This product can expose you to chemicals including, Toluene which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

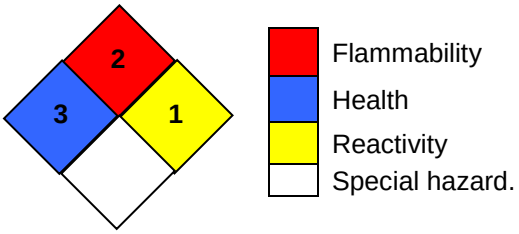
16.Other information, including date of preparation or last revision

HMIS Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 05/29/2019

Version #: 1.1

Further Information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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