1. Identification

1.1. Product identifier

Trade name	Dynasylan® 4150
Chemical Name	Silane modified polyethyleneglycol

1.2. Recommended use of the chemical and restrictions on use

Relevant applications identified	For industrial use
Function	Surface modifier Cosmetics

1.3. Details of the supplier of the safety data sheet

Company	Evonik Corporation USA 299 Jefferson Road Parsippany,NJ 07054-0677 USA
Telephone	973-929-8000
Telefax	973-929-8040
Email address	Product-Regulatory-Services@Evonik.com

1.4. 24 HOUR EMERGENCY TELEPHONE NUMBERS:

CHEMTREC - US & CANADA:	800-424-9300
CHEMTREC MEXICO:	01-800-681-9531
CHEMTREC INTERNATIONAL:	+1 703-527-3887 **(collect calls accepted)**
Product Regulatory Services :	973-929-8060

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Remarks Not a hazardous substance or mixture.

2.2. Label elements

Statutory basis	Classification according to Regulation 29CFR 1910.1200
Remarks	Not a hazardous substance or mixture.

2.3. Other hazards

None known

3. Composition/information on ingredients

• **Tetramethyl orthosilicate**	< 0.3%	
CAS-No.	681-84-5	
Flammable liquids		Category 3
Acute toxicity (Inhalation)		Category 1
Skin irritation		Category 2
Serious eye damage		Category 1

4. First aid measures

4.1. Description of first aid measures

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

Inhalation
If aerosol or mists are inhaled, take affected persons out into the fresh air.In case of persistent discomfort or other symptoms, consult a physician immediately.

Skin contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.

Eye contact
Keeping eyelid open, immediately rinse thoroughly for at least 5 minutes using plenty of water or, if necessary, eye rinsing solution.
In case of persistent discomfort: Consult an ophthalmologist.

Ingestion
If substance is accidentally swallowed, do not induce vomiting. If fully conscious, have patient rinse mouth with plenty of water and drink plenty of water in small sips. If unconscious, ensure person is in a stable position. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
If large amount of substance is absorbed, liberation of reaction product (methanol) can lead to symptoms of poisoning. Possible signs of poisoning include daze, dizziness, nausea, colicky abdominal pain or respiratory disturbance. Symptoms of increasing intoxication include dysopia or loss of eyesight. Treatment may include immediate gastric lavage, antidote treatment or correction of acid-base balance. Detection of the substance (methanol) is possible in blood. Evidence shows that the treatment of methanol absorption is enhanced through the administration of ethanol, which should be given to produce a blood level of at least 0.1%. Ethanol diminishes the production of toxic metabolites of methanol. Obtain treatment of allergic reaction if necessary.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:
Immediate gastric lavage. Antidote treatment, correction of acid-base balance.
Detection of substance (Methanol) possible in:
Blood
Antidote treatment: ethanol.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray, foam, CO2, dry powder.
Unsuitable extinguishing media: high volume water jet

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advice for firefighters

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

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Ensure adequate ventilation.

6.2. Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

6.3. Methods and material for containment and cleaning up

Soak up with absorbent material, e.g., sand, silica gel, acid binder, universal binder or sawdust. Place in a marked, sealable container and dispose of in accordance with existing federal, provincial, state and local regulations.

Additional advice

Remove sources of ignition and ventilate area.
Run off may create fire or explosion hazard in sewer.
Assure sufficient ventilation.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Normal measures for preventive fire protection.

Storage

Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.

8. Exposure controls/personal protection

8.1. Control parameters

Other information

No substance-specific limiting value being known.

8.2. Exposure controls

Engineering measures

Provide for good ventilation if vapors/aerosols are formed.

Personal protective equipment

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.

Hand protection

Glove material	for example, butyl-rubber
Material thickness	0.5 mm
Break through time	>= 480 min
Glove material	for example, Fluorinated rubber (Viton)
Material thickness	0.4 mm
Break through time	>= 480 min

Use impermeable gloves.
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.

Eye protection

Use chemical splash goggles or face shield.

Skin and body protection

A safety shower and eye wash fountain should be readily available.
To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures

Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

Protective measures

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.
Do not breathe in vapours or aerosols.
Avoid contact with skin and eyes.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

physical state	liquid		
Colour	colourless to brownish		
Form	liquid		
Odour	almost odorless		
Odour Threshold	not determined		
pH	4 - 5	(500 g/l)	(20 °C)
Solidification point	< -10 °C		
	Method:	DIN / ISO 3016	
Boiling point/range	not applicable		
Flash point	> 95 °C		
	Method:	DIN EN ISO 2719 (Pensky-Martens, Closed Cup)	

Evaporation rate	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapour pressure	not determined
Density	1.1 g/cm3 (20 °C)
Water solubility	miscible Decomposition by hydrolysis.
Partition coefficient: n-octanol/water	not determined
Autoignition temperature	not determined
Thermal decomposition	not determined
Viscosity, dynamic	10 - 20 mPa.s (20 °C)

9.2. Other information

Other information: Vapors can form explosive mixtures with air.

10. Stability and reactivity

10.1. Reactivity
No dangerous reaction known under conditions of normal use.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions: No dangerous reactions known.

10.4. Conditions to avoid
Protect from moisture.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
Decomposition products from hydrolysis in water
methanol

11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity: LD50 Rat: > 2000 mg/kg
Method: OECD TG 423
Assessment: The substance or mixture has no acute oral toxicity

Possibly harmful.
(methanol in case of hydrolysis)

Acute inhalation toxicity
Acute toxicity estimate : > 40 mg/l / 4 h / vapour
Method: Calculation method

Acute toxicity estimate : > 40 mg/l / 4 h / vapour
Method: Calculation method

Acute dermal toxicity
LD50 Rat: > 2000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin irritation
Rabbit
No skin irritation
Method: OECD Test Guideline 404

Eye irritation
Rabbit
No eye irritation
Method: OECD Test Guideline 405

Sensitization
Sensitization test Guinea pig: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Assessment of STOT single exposure
no evidence for hazardous properties

Assessment of STOT repeat exposure
no evidence for hazardous properties

Risk of aspiration toxicity
No evidence of aspiration toxicity

Gentoxicity in vitro
Ames test
negative
Method: OECD TG 471

Carcinogenicity
No evidence that cancer may be caused.

Toxicity to reproduction
No data available

12. Ecological information

12.1. Toxicity
No ecotoxicological data is available for this product.

12.2. Persistence and degradability
Biodegradability
No data available

12.3. Bioaccumulative potential
Bioaccumulation
No data available

12.4. Mobility in soil

Mobility — No data available

12.5. Other adverse effects

Further Information — No further information available

13. Disposal considerations

13.1. Waste treatment methods

Product

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method.

Uncleaned packaging

Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.
Incorrect disposal or reuse of this container is illegal and can be dangerous.
Other countries: observe the national regulations.

14. Transport information

Not dangerous according to transport regulations.

14.1.	UN number:	--
14.2.	UN proper shipping name:	--
14.3.	Transport hazard class(es):	--
14.4.	Packing group:	--
14.5.	Environmental hazards (Marine pollutant):	--
14.6.	Special precautions for user:	Yes

Not dangerous according to transport regulations.

15. Regulatory information

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- No SARA Hazards

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

- None listed

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

HMIS Ratings

Health :	1
Flammability :	1
Physical Hazard :	0

NFPA Ratings

Health :	1
Flammability :	1
Reactivity :	0

16. Other information

Further information

Revision date 05/29/2015

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

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Legend

ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygenists
ACS	Advisory Committee on Sustainability
ADI	Acceptable Daily Intake
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand
c.c.	closed cup
CAO	Cargo Aircraft Only
Carc	Carcinogen
CAS	Chemical Abstract Services
CDN	Canada
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response – Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	carcinogenic-mutagenic-toxic for reproduction
COD	Chemical oxygen demand
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
ErC50	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ICCA	International Council of Chemical Association
ID	Identification number
IMDG	International Maritime Dangerous Goods
IUPAC	International Union of Pure and Applied Chemistry
ISO	International Organization For Standardization
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
L(E)C50	LC50 or EC50
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
RQ	Reportable Quantity
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very persistent, very bioaccumulative

voc	volatile organic compounds
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization