SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. Identification

Product identifier: Dynasylan® 2101

Other means of identification
CAS Number: 23843-64-3

Recommended restrictions
Recommended use: For industrial use Coupling agent
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
Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements

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

3. Composition/information on ingredients

Substances

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Description of first aid measures

General information: 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.

Personal Protection for First-aid Responders: No data available.

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.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

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: Standard procedure for chemical fires.

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.

Special protective equipment for fire-fighters: As in any fire, wear self-contained positive-pressure breathing apparatus and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

Accidental release measures: No data available.

Methods and material for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Fill into marked, sealable containers. To be disposed of in compliance with existing regulations.

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: No data available.

Local/Total ventilation: No data available.

Safe handling advice: Assure sufficient ventilation. Application, processing: Provide good ventilation or extraction.Do not breathe in vapours or aerosols. Avoid contact with skin and eyes.

Contact avoidance measures: No data available.

Storage

Safe storage conditions: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Explosion protection equipment required.Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Recommended storage temperature: 5 - 25 °C. Store above freezing.

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 No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection: Safety glasses

Skin Protection

Hand Protection: Material: Butyl rubber.
Break-through time: >= 480 min
Material: Fluorinated rubber (Viton)
Break-through time: >= 240 min
Additional Information: 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., The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).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.

Skin and Body Protection:	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. Immediately remove 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 light yellow
Odor:	specific
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	435 °F/224 °C at 1,013 hPa Method: DIN 51751
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:	284 - 300 °F/140 - 149 °C Method: DIN EN 22719
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	4.0 - 8.0 at 68 °F/20 °C Method: DIN 19268 Mixture 1:1, in Water

Viscosity

Dynamic viscosity:	< 800 mPa.s at 68 °F/20 °C Method: DIN 53015
Kinematic viscosity:	No data available.

Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	immiscible decomposition by hydrolysis
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	1.142 - 1.154 g/cm3 at 68 °F/20 °C Method: DIN 51757
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Peroxides:	Not applicable
Molecular weight:	222.3 g/mol

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:	Reacts with: Strong oxidizing agents. Acids.
Conditions to avoid:	Keep away from moisture.
Incompatible Materials:	Water. Strong oxidizing agents. Acids.
Hazardous Decomposition Products:	Methanol in case of hydrolysis. Alcohol formed by hydrolysis lowers the flash point of the product.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50, Rat, Female, Male, > 5,000 mg/kg, OECD 401

Dermal

Product:	LD 50, Rat, Female, Male, > 2,000 mg/kg, OECD 402, Not toxic after single exposure

Inhalation

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

Repeated dose toxicity
Product: NOAEL Rat, Female, Male, Oral, 28 day, daily, >= 1,000 mg/kg, (analogy)

Skin Corrosion/Irritation
Product: Not irritating, OECD 404, (Rabbit)

Serious Eye Damage/Eye Irritation
Product: Not irritating, OECD 405, Rabbit

Respiratory or Skin Sensitization
Product: Buehler Test, OECD 406, Guinea Pig, Not a skin sensitizer., (analogy)

Carcinogenicity
Product: No data available.

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 1910.1001-1053), 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, (analogy)

In vivo
Product: Micronucleus test, OECD 474, Oral, Rat, Female, Male, negative

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure
Product: Based on available data, the classification criteria are not met.

Aspiration Hazard
Product: No evidence of aspiration toxicity

Information on health hazards

Other hazards
Product: An Expert Judgment stated that no classification is necessary based on present knowledge.;

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50, Cyprinus carpio, 96 h, > 100 mg/lOECD 203, (analogy)

Aquatic Invertebrates

Product: EC 50, Daphnia magna, 48 h, > 100 mg/lOECD 202, (analogy)

Toxicity to Aquatic Plants

Product: EC 50, Algae (Pseudokirchneriella subcapitata), 72 h, > 220 mg/l, OECD 201, (analogy)

Toxicity to microorganisms

Product: local activated sludge, 30 min, > 284 mg/l, OECD 209, (analogy)

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to microorganisms

Product: local activated sludge, 30 min, > 284 mg/l, OECD 209, (analogy)

Persistence and Degradability

Biodegradation

Product: Not readily degradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil:

Product: No data available.

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, state, provincial and local regulations.

Contaminated Packaging: Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. 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
Not regulated as a dangerous good
Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

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) Proposed Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
None present or none present in regulated quantities.
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Not classified

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)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including, methanol 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

Health		**1**
Flammability		**1**
Physical Hazards		**0**
PERSONAL PROTECTION		

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

Version #: 1.4

Generation date: 01/18/2024

Date of first report version: 06/18/2020

Abbreviations and acronyms:

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS -

Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.

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

Disclaimer: This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.