

**SAFETY DATA SHEET****Dynasylan® SIVO 110**

Material no.		Version	<b>3.0 / US</b>
Specification	<b>155105</b>	Revision date	<b>05/26/2015</b>
Order Number		Print Date	<b>06/25/2015</b>
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**1. Identification****1.1. Product identifier**

Trade name Dynasylan® SIVO 110

**1.2. Recommended use of the chemical and restrictions on use**

Relevant applications identified For industrial use  
Function Surface modifier

**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**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Flammable liquids	Category 4	H227
Specific target organ toxicity - single exposure	Category 1	H370

**2.2. Label elements**

Statutory basis Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Symbol(s)



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Signal word	Danger
Hazard statement	H227 - Combustible liquid. H370 - Causes damage to organs.
Precautionary statement Prevention	P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P260 - Do not breathe dust/ fume/ gas/ mist/ vapours/spray. P264 - Wash skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/ eye protection/ face protection.
Precautionary statement Reaction	P307 + P311 - IF exposed or concerned: Call a POISON CENTER/doctor. P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Precautionary statement Storage	P403 + P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up.
Precautionary statement Disposal	P501 - Dispose of contents/ container to an approved waste disposal plant.

**2.3. Other hazards**

None known

**3. Composition/information on ingredients****Chemical nature**

Organofunctional polysiloxane, modified

**• Methanol < 3%**

CAS-No. 67-56-1

Flammable liquids

Acute toxicity (Oral)

Acute toxicity (Inhalation)

Acute toxicity (Dermal)

Specific target organ toxicity - single exposure

Category 2

Category 3

Category 3

Category 3

Category 1

**Other information**

This material is classified as hazardous under OSHA regulations.

**4. First aid measures****4.1. Description of first aid measures****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.

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**Eye contact**

In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

**Ingestion**

If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

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

None known

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

After absorbing large amounts of substance:  
administration of activated charcoal.

Acceleration of gastrointestinal passage

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**5. Fire-fighting measures****5.1. Extinguishing media**

Suitable extinguishing media: Water spray, foam, CO<sub>2</sub>, dry powder.

Unsuitable extinguishing media: High volume water jet.

**5.2. Special hazards arising from the substance or mixture**

Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

**5.3. Advice for firefighters**

Containers can build up pressure if exposed to heat (fire). Cool with water spray. As in any fire, wear self-contained, pressure-demand breathing apparatus (MSHA-NIOSH approved or equivalent) and full protective gear.

In case of fire: wear a self contained respiratory apparatus

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**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Do not inhale vapors / aerosols.

**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**

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).

**Additional advice**

Remove sources of ignition and ventilate area.

Run off may create fire or explosion hazard in sewer.

Assure sufficient ventilation.

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**7. Handling and storage****7.1. Precautions for safe handling**

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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

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 MSDS/label precautions even after container is emptied because it may retain product residues.

### Storage

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.

### Further information

Keep tightly sealed in original packing.

Protect from frost.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

• Methanol		
CAS-No.	67-56-1	
Control parameters	200 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	250 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters		Skin designation:(ACGIH)
	Can be absorbed through the skin.	
Control parameters	200 ppm 260 mg/m <sup>3</sup>	Permissible exposure limit:(OSHA Z1)
Control parameters	200 ppm 260 mg/m <sup>3</sup>	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Ceiling Limit Value:(US CA OEL)
Control parameters	250 ppm 325 mg/m <sup>3</sup>	Short Term Exposure Limit (STEL):(US CA OEL)
Control parameters		Skin designation:(US CA OEL)
	Can be absorbed through the skin.	
Control parameters	200 ppm 260 mg/m <sup>3</sup>	Time Weighted Average (TWA):(TN OEL)
Control parameters	250 ppm 325 mg/m <sup>3</sup>	Short Term Exposure Limit (STEL):(TN OEL)
Control parameters		Skin designation:(TN OEL)
	Can be absorbed through the skin.	

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**8.2. Exposure controls****Engineering measures**

Use this product preferably in a closed system, or use process enclosures, local exhaust ventilation or other engineering controls to minimize airborne exposure.

**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

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.

Use impermeable gloves.

Selection of protective gloves to meet the requirements of specific workplaces.

Suitability for specific workplaces should be clarified with protective glove manufacturers.

Please observe that the daily duration of usage of a chemical protective glove is in practice far shorter due to the many influencing factors (e.g. temperature, mechanical strain on the glove material) than the permeation time determined acc. EN 374.

**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 (29CFR 1910.132) be conducted before using this product.

**Hygiene measures**

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.

Remove contaminated or saturated clothing.

Wash contaminated clothing before re-use.

**Protective measures**

Avoid contact with skin, eyes and clothing.

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.

If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

**9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

physical state	liquid
Colour	yellowish milky
Form	liquid

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Odour	sour
Odour Threshold	not determined
pH	4 - 7 (1000 g/l) (20 °C) Medium: Water
Melting point/range	no data available
Boiling point/range	ca. 92 °C
Flash point	> 90 °C Method: DIN EN ISO 2719 (Pensky-Martens, Closed Cup)
Evaporation rate	not determined
Flammability (solid, gas)	no data available
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapour pressure	no data available
Density	1.1 - 1.2 g/cm <sup>3</sup> (20 °C) Method: DIN 51757
Water solubility	no data available
Partition coefficient: n-octanol/water	not determined
Autoignition temperature	not determined
Thermal decomposition	not determined
Viscosity, dynamic	< 500 mPa.s (20 °C) Method: DIN 53 015

**9.2. Other information**

Explosiveness 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 Exothermic reaction with:  
acids  
alkalis

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**10.4. Conditions to avoid**

Keep away from heat and sources of ignition.  
humidity

**10.5. Incompatible materials**

Acids, alkalis

**10.6. Hazardous decomposition products**

Decomposition products in hydrolysis/thermal decomposition  
methanol

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**11. Toxicological information****11.1. Information on toxicological effects**

*No toxicological studies are available on the mixture.*

Acute oral toxicity                      Acute toxicity estimate : 3334 mg/kg  
Method:                                      Calculation method

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

Acute dermal toxicity                    Acute toxicity estimate : > 5000 mg/kg  
Method:                                      Calculation method

carcinogenicity assessment            Contains no carcinogenic substances as defined by NTP, IARC and/or  
OSHA.

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**12. Ecological information****12.1. Toxicity**

*No ecotoxicological studies are available on the mixture.*

**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

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**13. Disposal considerations****13.1. Waste treatment methods****Product**

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.**

**Uncleaned 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****D.O.T. Road/Rail**

- |  |  |
|--|--|
| 14.1. UN number:   | UN 1230                                |
| 14.2. UN proper shipping name:                           | Methanol solutions, combustible liquid |
| 14.3. Transport hazard class(es):                        | 3                                      |
| 14.4. Packing group:                                     | III                                    |
| 14.5. Environmental hazards (Marine pollutant):          | --                                     |
| 14.6. Special precautions for user:                      | Yes                                    |
| ROAD: Not regulated in packages 450 liter or less. (CFR) |  |
| RAIL: Not regulated in packages 450 liter or less. (CFR) |  |

**Air transport ICAO-TI/IATA-DGR****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:                                       | --  |
| 14.6. Special precautions for user:                                | Yes |
| IATA-C: Not hazardous freight in air traffic (ICAO-TI / IATA-DGR). |     |
| IATA-P: Not hazardous freight in air traffic (ICAO-TI / IATA-DGR). |     |

**Sea transport IMDG-Code/GGVSee (Germany)****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) | -- |



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pollutant):

- 14.6. Special precautions for user: Yes  
Not classified as hazardous sea cargo (IMDG code)
- 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:  
for transport approval see regulatory information

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**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:

- Methanol  
CAS-No. 67-56-1

**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:

- Acute Health Hazard
- Fire Hazard

**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:

- Methanol  
CAS-No. 67-56-1

**Toxic Substances Control Act (TSCA)**

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

- None listed

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**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:

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

- Methanol  
CAS-No. 67-56-1

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 :	2*
Flammability :	2
Physical Hazard :	0

**NFPA Ratings**

Health :	1
Flammability :	2
Reactivity :	0

**16. Other information****Further information**

Revision date 05/26/2015

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

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**Legend**

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

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