SAFETY DATA SHEET

1. Identification

Product identifier: Dynasylan® HYDROSIL 1153

Other means of identification

Recommended use: For industrial use
Coupling agent
Curing agents.
Surface modifier

Recommended restrictions: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Operations GmbH
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45128 Essen
Germany

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2. Hazard(s) identification

Classification according to GHS

Health Hazards

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

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:	Causes severe skin burns and eye damage.
Precautionary Statements	
Prevention:	Do not breathe dust/fume/gas/mist/vapors/spray. 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]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage:	Store locked up.
Disposal:	Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.
Other hazards:	Due to the pH-value (>11.5), the product is considered to be corrosive.

3. Composition/information on ingredients

Mixtures

General information: aqueous oligomeric aminoalkylfunctional silane hydrolysate

4. First-aid measures

Description of first aid measures

General information:	Immediately remove contaminated clothing.
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:	Wash off immediately with plenty of water. Seek medical advice.
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:	None known.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	Therapy as for chemical burn. If substance has been swallowed: Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear. If necessary, suck away leftover substance.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, fog, CO_2, dry chemical, or alcohol resistant foam.
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:	In case of fire: wear a self contained respiratory apparatus

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Ensure adequate ventilation.
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:	Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	Provide good ventilation or extraction.
Safe handling advice:	Provide good ventilation or extraction. Do not breathe in vapours or aerosols.Handle in accordance with good industrial hygiene and safety practice. The personal protective equipment used must meet the requirements of Regulation (EU) 2016/425 and amendments (CE certification). 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 skin and eyes.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat.Material may crystallize or solidify upon exposure to low temperatures. Crystallized or solidified material can be utilized after melting at elevated temperatures without impacting handling or physical properties. Refer to technical data sheet for specific instructions. Homogenise before using.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

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 (PPE)

General information: No data available.

Eye/face protection: close-fitting protective goggles (e.g. closed goggles)

Hand Protection: Material: Butyl rubber.
Break-through time: >= 480 min
Glove thickness: 0,5 mm
Material: Fluorinated rubber (Viton)
Break-through time: >= 480 min
Glove thickness: 0,4 mm
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).

Other: suitable protective clothing chemical protective suit, disposable protective suit (acid-proof)

Respiratory Protection: In case of dusts/vapours/aerosols being formed or if the limit values like TLV are exceeded: use respiratory equipment with suitable filter (filter type ABEK) or wear a self contained respiratory apparatus Use only respiratory protection equipment with CE-symbol including four digit test number. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Note time limit for wearing respiratory protective equipment.

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 light yellow

Odor: Characteristic

Odor Threshold:	No data available.
Freezing point:	< -4 °C/< 25 °F Method: DIN 3016
Boiling Point:	99 °C/210 °F 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:	>= 95 °C/>= 203 °F Method: DIN EN ISO 2719
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	11,5 - 12 Method: DIN 19268 50 % 20 °C/68 °F
Viscosity	
Dynamic viscosity:	< 200 mPa.s 20 °C/68 °F Method: DIN 53015
Kinematic viscosity:	No data available.
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	< 1 Pa 20 °C/68 °F Method: calculated active substance
Relative density:	No data available.
Density:	1,1 - 1,2 g/cm3
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

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:	Keep away from heat.
Incompatible Materials:	Acids.
Hazardous Decomposition Products:	None known.

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: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: Corrosive.

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

Respiratory or Skin Sensitization
Product: No data available.

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

Germ Cell Mutagenicity
In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

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 toxicological tests are available on the product.;

12. Ecological information

Ecotoxicity:
Acute hazards to the aquatic environment:

Fish
Product: LC 0, Brachydanio rerio (zebrafish), 96 h, > 934 mg/l OECD 203, (analogy)

Aquatic Invertebrates
Product: EC 50, Daphnia magna, 48 h, 331 mg/l OECD 202, (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: EC 10, Pseudomonas putida, 5,75 h, 13 mg/l, DIN EN ISO 10712, (analogy)

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants

Product: NOEC (Desmodesmus subspicatus (green algae), 72 h): 1,3 mg/l (OECD 201) (analogy)

Toxicity to microorganisms

Product: EC 10, Pseudomonas putida, 5,75 h, 13 mg/l, DIN EN ISO 10712, (analogy)

Persistence and Degradability

Biodegradation

Product: No data available.

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.

Other adverse effects:

Other hazards

Product: No data available.

Additional Information: No ecotoxicological data is available for this product.

13. Disposal considerations

Disposal methods: With respect to local regulations, e.g. dispose of to suitable waste incineration plant.

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

International Regulations

IATA-DGR

UN/ID No.	:	UN 1760
Proper shipping name	:	Corrosive liquid, n.o.s. (Aqueous oligomeric aminoalkylfunctional silane hydrolysate)
Class	:	8
Packing group	:	II
Labels	:	8
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number or ID number	:	UN 1760
Proper shipping name	:	CORROSIVE LIQUID, N.O.S. (Aqueous oligomeric aminoalkylfunctional silane hydrolysate)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no
Remarks	:	SW2 - Clear of living quarters.

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

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

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

Issue Date: 25.03.2019

Version #: 1.14

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: Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

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