

SAFETY DATA SHEET

1. Identification

Product identifier: TEGO® Variplus 1201 TF

Chemical name: Polyurethane polyol resin

Other means of identification

Recommended use: Industrial use

Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Operations GmbH
Rellinghauser Str. 1-11
45128 Essen
Germany

Telephone : +49 201 173 01

Fax : +49 201 173 3000

E-mail : productsafety-cs@evonik.com

Emergency telephone number:

24-Hour Health : +49 2365 49 2232

Emergency : +49 2365 49 4423 (Fax)

2. Hazard(s) identification

Classification according to GHS

Physical Hazards

Flammable liquids Category 2

Health Hazards

Acute toxicity (Oral) Category 5

Skin Corrosion/Irritation Category 3

Serious Eye Damage/Eye Irritation Category 2A

Specific Target Organ Toxicity -
Single Exposure Category 3
(Narcotic effect.)

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Highly flammable liquid and vapor.
May be harmful if swallowed.
Causes mild skin irritation.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

Response: Call a POISON CENTER or doctor/ physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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

Other hazards: None known.

3. Composition/information on ingredients

Chemical name:
Polyurethane polyol resin

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Ethyl acetate	No data available.	141-78-6	30 - 60%

* 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 soiled or soaked clothing immediately
Inhalation:	fresh air supply, consult a doctor if feeling unwell.
Skin Contact:	In case of contact with skin wash off immediately with plenty of water In case of discomfort: Supply with medical care.
Eye contact:	In case of contact with eyes rinse thoroughly with plenty of water. If symptoms persist, seek medical advice.
Ingestion:	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Serious eye irritation Depending on the dose inhalation and/or ingestion may cause: headache, inebriation, unconsciousness.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
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5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: High volume water jet.

Special hazards arising from the substance or mixture:

In the event of fire the following can be released: - carbon dioxide, carbon monoxide - Nitrogen oxides (NOx) Under certain conditions of combustion traces of other toxic substances cannot be excluded

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	Keep away from sources of ignition - no smoking. Take action to prevent static discharges. Vapours may form explosive mixtures with air. Cool endangered containers by water spray
Special protective equipment for fire-fighters:	Do not inhale explosion and/or combustion gases. Self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Keep away sources of ignition. Ensure adequate ventilation.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Take up with absorbent material (eg sand, kieselguhr, acid binder, universal binder, sawdust). Dispose of absorbed material in accordance with the regulations.
Environmental Precautions:	Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	No data available.
Safe handling advice:	Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Provide good ventilation of working area (local exhaust ventilation if necessary). Use respiratory protection during spraying.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep container tightly closed in a cool, well-ventilated place.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment
General information:

No data available.

Eye/face protection:

Safety glasses

Skin Protection
Hand Protection:

 Material: Nitrile rubber.
 Break-through time: 480 min
 Glove thickness: 0,1 mm

Other:

protective clothing

Respiratory Protection:

in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2

Hygiene measures:

Wash hands before breaks and immediately after handling the product. Remove soiled or soaked clothing immediately. When using do not eat, drink or smoke.

9. Physical and chemical properties
Information on basic physical and chemical properties
Appearance
Physical state:

liquid

Form:

liquid

Color:

colorless to yellowish

Odor:

solvent-like

Odor Threshold:

not measured

Freezing point:

not measured

Boiling Point:

Approximate 167 °F/75 °C Solvent

Flammability:

not measured

Upper/lower limit on flammability or explosive limits
Explosive limit - upper:

not measured

Explosive limit - lower:

not measured

Flash Point:

Approximate 25 °F/-4 °C (DIN 53213)

Self Ignition Temperature:

not measured

Decomposition Temperature:

not measured

pH:

Not applicable

Viscosity
Dynamic viscosity:

Approximate 2.000 mPa.s (68 °F/20 °C, DIN 53015)

Kinematic viscosity:

 Approximate 1923 mm²/s (68 °F/20 °C, calculated)

Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	partly soluble
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Vapor pressure:	not measured
Relative density:	not measured
Density:	Approximate 1,04 g/cm ³ (68 °F/20 °C)
Bulk density:	No data available.
Relative vapor density:	not measured

Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Minimum ignition temperature:	not measured
Metal Corrosion:	Not corrosive to metals
Evaporation Rate:	not measured

10. Stability and reactivity

Reactivity:	see section "Possibility of hazardous reactions".
Chemical Stability:	The product is stable under normal conditions.
Possibility of hazardous reactions:	No hazardous reactions with proper storage and handling
Conditions to avoid:	None with proper storage and handling.
Incompatible Materials:	Not known.
Hazardous Decomposition Products:	None with proper storage and handling.

11. Toxicological information

Information on toxicological effects

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 (ATEmix): 4.902 mg/kg**Components:**
Ethyl acetate LD 50 (Rabbit): 4.934 mg/kg**Dermal****Product:** No data available.**Components:**
Ethyl acetate LD 50 (Rabbit): > 20.000 mg/kg**Inhalation****Product:** No data available.**Components:**
Ethyl acetate No classification, Vapour Not applicable, Dusts, mists and fumes**Repeated dose toxicity****Product:** No data available.**Components:**
Ethyl acetate NOAEL (Rat(Female, Male), Oral): 900 mg/kg LOAEL (Rat(Female, Male), Oral): 3.600 mg/kg**Skin Corrosion/Irritation****Product:** No data available.**Components:**
Ethyl acetate Not irritating**Serious Eye Damage/Eye Irritation****Product:** No data available.**Components:**
Ethyl acetate OECD 405 (Rabbit): Irritating.**Respiratory or Skin Sensitization****Product:** No data available.**Components:**
Ethyl acetate Maximization Test, OECD 406 (Guinea Pig): Not a skin sensitizer.
Not a respiratory sensitizer**Carcinogenicity****Product:** No data available.**Components:**
Ethyl acetate Not classified**Germ Cell Mutagenicity**

No data available.

In vitro

Product: No data available.
Components:
 Ethyl acetate Ames test (OECD 471): negative

In vivo

Product: No data available.
Components:
 Ethyl acetate Micronucleus test (OECD 474) (Hamster): negative

Reproductive toxicity

Product: No data available.
Components:
 Ethyl acetate Not classified

Specific Target Organ Toxicity - Single Exposure

Product: No data available.
Components:
 Ethyl acetate Inhalation - vapor: Central nervous system. - Category 3 with narcotic effects. May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.
Components:
 Ethyl acetate Not classified

Aspiration Hazard

Product: Not classified
Components:
 Ethyl acetate Not classified

Information on health hazards
Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:
Acute hazards to the aquatic environment:
Fish

Product: No data available.
Components:
 Ethyl acetate LC 50 (Pimephales promelas, 96 h): 230 mg/l

Aquatic Invertebrates

Product: No data available.
Components:
 Ethyl acetate No data available.

Toxicity to Aquatic Plants

Product: No data available.
Components:

Ethyl acetate No data available.

Toxicity to microorganisms

Product: No data available.

Components:
Ethyl acetate No data available.

Chronic hazards to the aquatic environment:**Fish**

Product: No data available.

Components:
Ethyl acetate No data available.

Aquatic Invertebrates

Product: No data available.

Components:
Ethyl acetate NOEC (Daphnia magna, 21 d): 2,4 mg/l (OECD 211)

Toxicity to Aquatic Plants

Product: No data available.

Components:
Ethyl acetate NOEC (Desmodesmus subspicatus (green algae), 72 h): > 100 mg/l (OECD 201)

Toxicity to microorganisms

Product: No data available.

Components:
Ethyl acetate No data available.

Persistence and Degradability**Biodegradation**

Product: No data available.

Components:
Ethyl acetate 69 % (20 d) The 10 day time window criterion is not fulfilled., aerobic

BOD/COD Ratio

Product: No data available.

Components:
Ethyl acetate No data available.

Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product: No data available.

Components:
Ethyl acetate No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: not measured

Components:
Ethyl acetate Log Kow: 0,68 25 °C (OPPTS 830.7560) No

Mobility in soil:

Product No data available.
Components:
 Ethyl acetate No data available.

Product No data available.
Components:
 Ethyl acetate No data available.

Other adverse effects:

Other hazards
Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

14. Transport information

International Regulations

IATA-DGR

UN/ID No. : UN 1866
 Proper shipping name : Resin solution
 Class : 3
 Packing group : II
 Labels : 3
 Packing instruction (cargo aircraft) : 364
 Packing instruction (passenger aircraft) : 353

IMDG-Code

UN number or ID number : UN 1866
 Proper shipping name : RESIN SOLUTION
 Class : 3
 Packing group : II
 Labels : 3
 EmS Code : F-E, S-E
 Marine pollutant : no
 Remarks : Stowage category B

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

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

Issue Date: 26.03.2019

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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