

Product name: TEGO® Variplus 1201 TF

SAFETY DATA SHEET

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:
TEGO® Variplus 1201 TF

Chemical name:
Polyurethane polyol resin

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Industrial use

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

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-sp@evonik.com

1.4 Emergency telephone number:

24-Hour Health : +49 2365 49 2232
Emergency : +49 2365 49 4423 (Fax)

National Poison Information Service (NPIS)
England, Scotland and Wales: NHS: 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Physical Hazards

Flammable liquids Category 2 H225: Highly flammable liquid and vapor.

Health Hazards

Serious eye irritation Category 2 H319: Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure Category 3 H336: May cause drowsiness or dizziness.

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2.2 Label Elements



Signal Words: Danger

Hazard Statement(s):
 H225: Highly flammable liquid and vapor.
 H319: Causes serious eye irritation.
 H336: May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
 P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
 P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313: If eye irritation persists: Get medical advice/attention.

Hazardous ingredients which must be listed on the label:

Ethyl acetate

Supplemental label information

EUH066: Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

Chemical name:

Polyurethane polyol resin

3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	UK-REACH Registration No.	REACH Registration No.	M-Factor:	Notes
Ethyl acetate	50 - <100%	141-78-6	205-500-4		01-211947510-3-46	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

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This substance is listed as SVHC.

Classification

Chemical name	Classification	Notes
Ethyl acetate	Classification: Flam. Liq.: 2: H225; Eye Irrit.: 2: H319; STOT SE: 3: H336; Supplemental label information: EUH066;	None.

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 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.

4.3 Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:	Foam, carbon dioxide or dry powder.
Unsuitable extinguishing media:	High volume water jet.

5.2 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

5.3 Advice for firefighters

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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.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep away sources of ignition. Ensure adequate ventilation.
- 6.1.1 For non-emergency personnel:** No data available.
- 6.1.2 For emergency responders:** No data available.
- 6.2 Environmental Precautions:** Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.
- 6.3 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.
- 6.4 Reference to other sections:** For further information on exposure monitoring and disposal see sections 8 and 13.

SECTION 7: Handling and storage
7.1 Precautions for safe handling

- Technical measures:** No data available.
- Local/Total 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.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s): No further recommendations.

SECTION 8: Exposure controls/personal protection
8.1 Control Parameters
Occupational Exposure Limits

Chemical name	Type	Form of exposure	Exposure Limit Values		Source
Ethyl acetate	STEL 15		400 ppm	1,468 mg/m ³	EH40 WEL (01 2020)

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	minutes				
	TWA		200 ppm	734 mg/m ³	EH40 WEL (08 2018)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Ethyl acetate	Workers	Inhalation	Systemic, short-term; 1468 mg/m ³	irritation respiratory tract
	General population	Inhalation	Systemic, short-term; 734 mg/m ³	irritation respiratory tract
	General population	Inhalation	Local, long-term; 367 mg/m ³	irritation respiratory tract
	Workers	Inhalation	Systemic, long-term; 734 mg/m ³	irritation respiratory tract
	General population	Inhalation	Local, short-term; 734 mg/m ³	irritation respiratory tract
	Workers	Inhalation	Local, short-term; 1468 mg/m ³	irritation respiratory tract
	Workers	Inhalation	Local, long-term; 734 mg/m ³	irritation respiratory tract
	Workers	Dermal	Systemic, long-term; 63 mg/kg	irritation respiratory tract
	General population	Inhalation	Systemic, long-term; 367 mg/m ³	irritation respiratory tract
	General population	Dermal	Systemic, long-term; 37 mg/kg	irritation respiratory tract
	General population	Eyes	Local effect;	Low hazard (no threshold derived)
	Workers	Eyes	Local effect;	Low hazard (no threshold derived)
	General population	Oral	Systemic, long-term; 4.5 mg/kg	Repeated dose toxicity

PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
Ethyl acetate	Sediment (marine water)	0.115 mg/kg	
	Aquatic (freshwater)	0.24 mg/l	
	Sewage treatment plant	650 mg/l	
	Predator	0.2 g/kg	Oral
	Sediment (freshwater)	1.15 mg/kg	
	Aquatic (marine water)	0.024 mg/l	
	Soil	0.148 mg/kg	

8.2 Exposure controls

Appropriate Engineering Controls: No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection: Safety glasses

Hand Protection: Material: Nitrile rubber.
Break-through time: 480 min
Glove thickness: 0.1 mm

Skin and Body Protection: protective clothing

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

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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.
Environmental Controls:	The environmental regulations on the control and monitoring of environmental exposures are to be observed.

SECTION 9: Physical and chemical properties
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9.1 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 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
-4 °C
Method: DIN 53213

Auto-ignition temperature: not measured

Decomposition Temperature: not measured

pH: Not applicable

Viscosity
Dynamic viscosity: Approximate
2,000 mPa.s at 20 °C
Method: DIN 53015

Kinematic viscosity: Approximate
1923 mm²/s at 20 °C ,
Method: calculated

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/cm³ at 20 °C

Relative vapor density: not measured

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9.2 Other information

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

SECTION 10: Stability and reactivity

10.1 Reactivity:	see section "Possibility of hazardous reactions".
10.2 Chemical Stability:	The product is stable under normal conditions.
10.3 Possibility of hazardous reactions:	No hazardous reactions with proper storage and handling
10.4 Conditions to avoid:	Open flames, sparks or input of much heat
10.5 Incompatible Materials:	Not known.
10.6 Hazardous Decomposition Products:	None with proper storage and handling.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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, OECD 401

Dermal

Product:	No data available. Not classified for acute toxicity based on available data.
Components: Ethyl acetate	LD 50, Rabbit, Male, > 20,000 mg/kg, Draize-test

Inhalation

Product:	No data available. Not classified for acute toxicity based on available data.
Components: Ethyl acetate	Vapour, Not toxic after single exposure, No data available. Dust and mist, Not toxic after single exposure, No data available.

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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 Repeated exposure may cause skin dryness or cracking., EU-CLP as per Regulation (EU) No. 1272/2008, Annex VI

Serious Eye Damage/Eye Irritation

Product: No data available.
Components:
Ethyl acetate Irritating., OECD 405, Rabbit

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:

Product name: TEGO® Variplus 1201 TF

Ethyl acetate Not classified

Aspiration Hazard

Product: Not classified

Components:
 Ethyl acetate Not classified

11.2 Information on other hazards

Other information

Product: No data available.

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:
 Ethyl acetate LC 50, Pimephales promelas, 96 h, 230 mg/l US-EPA-method

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.

Toxicity to soil dwelling organisms

Product: No data available.

Components:
 Ethyl acetate No data available.

Toxicity to terrestrial organisms

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.

Product name: TEGO® Variplus 1201 TF

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.

Toxicity to soil dwelling organisms**Product:** No data available.**Components:**

Ethyl acetate No data available.

Toxicity to terrestrial organisms**Product:** No data available.**Components:**

Ethyl acetate No data available.

12.2 Persistence and Degradability**Biodegradation****Product:** No data available.**Components:**

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

12.3 Bioaccumulative potential**Bioconcentration Factor (BCF)****Product:** No data available.**Components:**

Ethyl acetate No data available.

Partition Coefficient n-octanol / water (log Kow)**Product:** not measured**Components:**

Ethyl acetate 0.68, 25 °C, OPPTS 830.7560, No

12.4 Mobility in soil:**Product** No data available.**Components:**

Ethyl acetate No data available.

12.5 Results of PBT and vPvB assessment:**Product** No data available.**Components:**

Ethyl acetate No data available.

12.6 Other adverse effects:**Other hazards**

Product name: TEGO® Variplus 1201 TF**Product:** Do not allow to enter soil, waterways or waste water canal.**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

General information: No data available.

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.

SECTION 14: Transport information**14.1 UN/ID No.**

ADR : UN 1866
RID : UN 1866
IMDG : UN 1866
IATA : UN 1866

14.2 UN proper shipping name

ADR : RESIN SOLUTION
RID : RESIN SOLUTION
IMDG : RESIN SOLUTION
IATA : Resin solution

14.3 Transport hazard class(es)

ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADR
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)
Remarks : Special Provision 640D, observe §35 GGVSEB

RID
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Remarks : Special Provision 640D

Product name: TEGO® Variplus 1201 TF

IMDG

 Packing group : II
 Labels : 3
 EmS Code : F-E, S-E
 Remarks : Stowage category B

IATA (Cargo aircraft only)

 Packing instruction (cargo aircraft) : 364
 Packing instruction (LQ) : Y341
 Packing group : II
 Labels : 3

IATA (Passenger and cargo aircraft)

 Packing instruction (passenger aircraft) : 353
 Packing instruction (LQ) : Y341
 Packing group : II
 Labels : 3

14.5 Environmental hazards
ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 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.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
EU Regulations
EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:

Classification	Lower-tier Requirements	Upper-tier Requirements
P5c. Flammable liquids	5,000 t	50,000 t

15.2 Chemical safety assessment: No chemical safety assessment was carried out for this product.

International regulations

Product name: TEGO® Variplus 1201 TF
Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

SECTION 16: Other information
Abbreviations and acronyms:

EH40 WEL:	UK. EH40 Workplace Exposure Limits (WELs), as amended
EH40 WEL / STEL:	Short Term Exposure Limit (STEL):
EH40 WEL / TWA:	Time Weighted Average (TWA):

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Key literature references and No data available.

sources for data:
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 as amended.	Classification procedure
Flammable liquids, Category 2	On basis of test data

Product name: TEGO® Variplus 1201 TF

Serious eye irritation, Category 2	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

Wording of the statements in section 2 and 3

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Training information: Comply with national laws regulating employee instruction.

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

Disclaimer: This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.