

**SAFETY DATA SHEET (EC 1907/2006)**

Zipper

VA-No.

Version

1.2 / REG\_EU

Revision date

14.11.2014

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**1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name : Zipper

Chemical Name : Polyether-modified polysiloxane

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

Relevant applications identified : Industrial Use

Applications which are not advised : None known.

**1.3. Details of the supplier of the safety data sheet**Company : Modify bv  
Helmkade 4  
NL 1901 BM Castricum  
The Netherlands

Telephone : +31 (0)251 657613

Telefax : +31 (0)251 607844

E-mail : info@modify.nl

**1.4. Emergency telephone number**Emergency information : +31 (0)251 657613 (Phone)  
+31 (0)251 607844 (Fax)**2. Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute toxicity (Inhalation)	Category 4	H332
Eye irritation	Category 2	H319
Chronic aquatic toxicity	Category 2	H411
Acute toxicity (Dermal)	Category 4	H312

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Harmful by inhalation and in contact with skin.

Irritating to eyes.

Toxic for aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

Constituent decisive for hazardous-substance labeling : polyether modified trisiloxane; CAS-No.: 134180-76-0

Symbol(s) :



Signal word : Warning

hazard statement : H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.  
H312 - Harmful in contact with skin.  
H411 - Toxic to aquatic life with long lasting effects.Precautionary Statement : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 - Avoid release to the environment.

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(Prevention) P280 - Wear protective gloves and eye/ face protection.

Precautionary Statement (Response) : P337 + P313 - If eye irritation persists: Get medical advice/attention.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P302 + P352 - IF ON SKIN: Wash with plenty of water/ soap.

**2.3. Other hazards**

None known

**3. Composition/information on ingredients**

Polyether-modified polysiloxane

**3.1. Substances****Information on ingredients / Hazardous components as per EU-CLP Regulation (EC) No. 1272/2008**

Chemical Name	CAS-No. EC-No. REACH-No.	Concentration	Classification
polyether modified trisiloxane	134180-76-0 -	>= 70 % - < 90 %	H312, 4 , Acute Tox. , Dermal H332, 4 , Acute Tox. , Inhalation H411, 2 , Aquatic Chronic H319, 2 , Eye Irrit.

**Information on ingredients / Hazardous components as per Directive 67/548/EC or Directive 1999/45/EC**

Chemical Name	CAS-No. EC-No. REACH-No.	Concentration	Classification
polyether modified trisiloxane	134180-76-0 -	>= 70 % - < 90 %	Xn, N; R20/21, R36, R51/53

Texts of H phrases, see in Chapter 16  
 See chapter 16 for text of risk phrases

**3.2. Mixtures**

-

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

General advice : Remove soiled or soaked clothing immediately

Inhalation : If inhaled remove from side of exposure to fresh air, seek medical advice.

Skin contact : In case of contact with skin wash off with soap and water.  
Take for medical treatment

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 the event of symptoms seek medical advice.

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

Symptoms : Eye irritation

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

Treat symptomatically.

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## 5. Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media : Full water jet

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

In the event of fire the following can be released:  
- Carbon monoxide, carbon dioxide, silicon dioxide

### 5.3. Advice for firefighters

Use self-contained breathing apparatus

Do not inhale explosion and/or combustion gases

Collect contaminated firefighting water separately, must not be discharged into the drains.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

### 6.2. Environmental precautions

Do not allow to enter drains or waterways

Do not discharge into the subsoil/soil.

### 6.3. Methods and material for containment and cleaning up

Take up with absorbent material (eg sand, kieselguhr, universal binder)

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.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Advice on safe handling : No special measures necessary if stored and handled as prescribed.

Hygiene measures : Do not eat, drink or smoke when working.  
Remove soiled or soaked clothing immediately.  
Wash hands before breaks and after work.

General protective measures : Avoid contact with eyes and skin  
Do not inhale gases/vapours/aerosols.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Prevention of fire and explosion

Information : No special measures required.

#### Storage

Information : none

Further information on storage conditions : Keep container tightly closed

### 7.3. Specific end use(s)

No further recommendations.

## 8. Exposure controls/personal protection

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## 8.1. Control parameters

DNEL : No DNEL/DMEL values on file.

PNEC : No PNEC values on file.

## 8.2. Exposure controls

Eye protection : safety glasses

Hand protection : Examples of suitable gloves are those made by the company Kächele-Cama Latex GmbH, Am Kreuzacker 9, D-36124 Eichenzell, e-mail vertrieb@kcl.de, with subsequent specification (test according to EN374); specific workplace conditions must be separately taken into account. These recommendations apply only to the product mentioned in the material data safety sheet that we supply and the purpose that we indicate.

Glove material: gloves made of nitril (NBR)

Break through time: 480 min

Glove thickness: 0,11 mm

Glove material: gloves made of natural latex

Break through time: 480 min

Glove thickness: 0,5 mm

Glove material: gloves made of chloroprene (CR, e.g. Neoprene)

Break through time: 480 min

Glove thickness: 0,65 mm

Glove material: gloves made of butyl (IIR)

Break through time: 480 min

Glove thickness: 0,7 mm

Body Protection : protective clothing

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

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : liquid

Form : liquid

Colour : light yellow

Odour : characteristic

Odour Threshold : not measured

pH : 6 - 8 (25 °C)  
40 g/l

Remarks: water

Melting point : Melting temperature  
< 0 °C

Boiling point : Boiling temperature  
> 200 °C

Flash point : > 140 °C  
Method: DIN EN 22719 (DIN 51758)

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Evaporation rate : not measured

Flammability : no data available

Upper Explosion/Ignition Limit : not measured

Lower explosion limit : not measured

Vapour pressure : not measured

Relative vapour density : not measured

Relative density : no data available

Solubility : not measured

Water solubility : (25 °C)  
Remarks: soluble

Partition coefficient (n-octanol/water) : not measured

Autoignition temperature : not measured

Thermal decomposition : not measured

Viscosity, kinematic : no data available

Viscosity, dynamic : 40 - 90 mPa·s  
(25 °C)  
Method: DIN 53019

Explosive properties : not measured

Oxidising properties : not oxidizing

## 9.2. Other information

Density : ca. 1,01 g/cm<sup>3</sup>  
(25 °C)  
Method: DIN 51757

Metal corrosion : Not corrosive to metals.

Ignition temperature : not measured

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## 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

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No hazardous reactions with proper storage and handling.

## 10.4. Conditions to avoid

## 10.5. Incompatible materials

Unknown

## 10.6. Hazardous decomposition products

None with proper storage and handling.

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## 11. Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : LD50  
Species: Rat  
Dose: 3.200 mg/kg

Acute toxicity (inhalation) : LC50  
Species: rat  
Exposure duration: 4 h  
Test atmosphere: Dust/Mist  
Dose: 1,08 mg/l  
Method: OECD Test Guideline 403

Acute toxicity (dermal) : LD50  
Species: rabbit  
Dose: 1.550 mg/kg

LD50  
Species: rat  
Dose: > 2.000 mg/kg

Irritation/corrosion of the skin : Result: slight irritant effect - does not require labelling

Serious eye damage/ eye irritation : Species: rabbit  
Result: strong irritant

Respiratory/skin sensitization : Species: Guinea pig  
Result: non-sensitizing  
Classification: Did not cause sensitization on laboratory animals.

Repeated dose toxicity : no data available

### CMR assessment

Carcinogenicity : no data available

Mutagenicity : no data available

Teratogenicity : no data available

Toxicity to reproduction : no data available

Specific Target Organ Toxicity - Single exposure : no data available

Specific Target Organ Toxicity - Repeated exposure : no data available

Aspiration hazard : No Aspiration toxicity classification

Other information : Harmful by inhalation and in contact with skin.

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Irritant to eyes.

The toxicological data refer to the undiluted 100 % product.

**12. Ecological information****Ecotoxicology Assessment**

Acute aquatic toxicity : Hazardous to the aquatic environment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

**12.1. Toxicity**Aquatoxicity, fish : Species: rainbow trout  
Exposure duration: 96 h  
LC50: 2,1 mg/lAquatoxicity, invertebrates : Species: Daphnia magna  
Exposure duration: 48 h  
EC50: 1,1 mg/lAquatoxicity, algae / aquatic plants : Species: Scenedesmus subspicatus  
Exposure duration: 72 h  
EbC50: 28,2 mg/l  
Remarks: refer to biomass  
Species: Scenedesmus subspicatus  
Exposure duration: 72 h  
ErC50: 152,2 mg/l  
Remarks: growth rate

Toxicity in microorganisms : no data available

chronic toxicity in fish : no data available

Chronic toxicity in aquatic Invertebrates : no data available

Toxicity in organisms which live in the soil : no data available

Toxicity in terrestrial plants : no data available

Toxicity to Above-Ground Organisms : no data available

**12.2. Persistence and degradability**

Photodegradation : no data available

Biological degradability : no data available

Physico-chemical removability : no data available

Biochemical Oxygen Demand (BOD) : no data available

Chemical Oxygen : no data available

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Demand (COD)

relation of BOD/COD : no data available

Dissolved organic carbon (DOC) : no data available

Adsorbed organic bound halogens (AOX) : no data available

Distribution among environmental compartments : no data available

## 12.3. Bioaccumulative potential

Bioaccumulation : no data available

## 12.4. Mobility in soil

Environmental distribution : no data available

## 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment : no data available

## 12.6. Other adverse effects

General Information : The product is considered to be a water pollutant (German law).  
Do not allow to enter soil, waterways or waste water canal.  
The ecotoxicological data refer to the undiluted 100 % product.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

Product : 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.

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## 14. Transport information

### Transport on land (ADR/RID/GGVSEB)

- 14.1. UN number: UN 3082  
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethersiloxane)  
14.3. Transport hazard class(es): 9  
14.4. Packing group: III  
14.5. Environmental hazards: Yes  
14.6. Special precautions for user: Yes  
ADR: Tunnel Restriction Code: (E)  
ADR: Environmentally hazardous  
RID: Environmentally hazardous

### Inland waterway transport (ADN/GGVSEB (Germany))

- 14.6. Special precautions for user: Yes  
Environmentally hazardous

### Air transport ICAO-TI/IATA-DGR

- 14.1. UN number: UN 3082  
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethersiloxane)  
14.3. Transport hazard class(es): 9



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- 14.4. Packing group: III  
14.5. Environmental hazards: Yes  
14.6. Special precautions for user: Yes  
IATA-C: Environmentally hazardous  
IATA-P: Environmentally hazardous

## Sea transport IMDG-Code/GGVSee (Germany)

- 14.1. UN number: UN 3082  
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethersiloxane)  
14.3. Transport hazard class(es): 9  
14.4. Packing group: III  
14.5. Environmental hazards (Marine pollutant): Yes  
14.6. Special precautions for user: Yes  
EmS: F-A,S-F  
Stowage category A  
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: for transport approval see regulatory information

## 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National legislation

Technical instructions : 5.2.5 (no class)  
on Air Quality

Major Accident : 9b  
Hazard Legislation

Water contaminating : hazard to waters  
class (Germany) Classification acc. to German law

Risk classification : ---  
according to  
BetrSichV (Germany)

Other regulations : Special local regulations must be adhered to when using products containing irritating or corrosive substances.  
BG Info Sheet M 050 "Activities Involving Hazardous Substances"  
Precautions to be observed for storage of hazardous substances: TRGS 510  
"Storage of Hazardous Substances in Movable Containers".

### 15.2. Chemical safety assessment

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

## 16. Other information

### List of references

Other information : Comply with national laws regulating employee instruction.  
Revision date : 14.11.2014

### Relevant H phrases from chapter 3

H312 : Harmful in contact with skin.  
H319 : Causes serious eye irritation.  
H332 : Harmful if inhaled.  
H411 : Toxic to aquatic life with long lasting effects.

### Relevant R phrases from chapter 3

R20/21 : Harmful by inhalation and in contact with skin.  
R36 : Irritating to eyes.  
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

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environment.

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

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**Legend**

<b>ADR</b>	European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>ADN</b>	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
<b>ADNR</b>	European agreement concerning the international carriage of dangerous goods by inland waterways (ADN)
<b>ASTM</b>	American Society for Testing and Materials
<b>ATP</b>	Adaptation to Technical Progress
<b>BCF</b>	Bioconcentration factor
<b>BetrSichV</b>	German Ordinance on Industrial Safety and Health
<b>c.c.</b>	closed cup
<b>CAS</b>	Chemical Abstract Services
<b>CESIO</b>	European Committee of Organic Surfactants and their Intermediates
<b>ChemG</b>	German Chemicals Act
<b>CMR</b>	carcinogenic-mutagenic-toxic for reproduction
<b>DIN</b>	German Institute for Standardization
<b>DMEL</b>	Derived minimum effect level
<b>DNEL</b>	Derived no effect level
<b>EINECS</b>	European Inventory of Existing Commercial Chemical Substances
<b>EC50</b>	half maximal effective concentration
<b>GefStoffV</b>	German Ordinance on Hazardous Substances
<b>GGVSEB</b>	German ordinance for road, rail and inland waterway transportation of dangerous goods
<b>GGVSee</b>	German ordinance for sea transportation of dangerous goods
<b>GLP</b>	Good Laboratory Practice
<b>GMO</b>	Genetic Modified Organism
<b>IATA</b>	International Air Transport Association
<b>ICAO</b>	International Civil Aviation Organization
<b>IMDG</b>	International Maritime Dangerous Goods
<b>ISO</b>	International Organization For Standardization
<b>LOAEL</b>	Lowest observed adverse effect level
<b>LOEL</b>	Lowest observed effect level
<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>PBT</b>	Persistent, bioaccumulative, toxic
<b>PEC</b>	Predicted effect concentration
<b>PNEC</b>	Predicted no effect concentration
<b>REACH</b>	REACH registration
<b>RID</b>	Convention concerning International Carriage by Rail
<b>STOT</b>	Specific Target Organ Toxicity
<b>SVHC</b>	Substances of Very High Concern
<b>TA</b>	Technical Instructions
<b>TPR</b>	Third Party Representative (Art. 4)
<b>TRGS</b>	Technical Rules for Hazardous Substances
<b>VCI</b>	German chemical industry association
<b>vPvB</b>	very persistent, very bioaccumulative
<b>VOC</b>	volatile organic compounds
<b>VwVwS</b>	German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
<b>WGK</b>	Water Hazard Class
<b>WHO</b>	World Health Organization