

## Material Safety Data Sheet

In accordance with Regulation (UE) no 2015/830, amending Regulation (UE) no 1907/2006 (REACH).

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### Polios NT170 LV

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

##### 1.1. Product identifier

Polios NT170 LV

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

The polyester polyol is used for the production of viscoelastic foam.

##### 1.3. Details of the supplier of the safety data sheet

Purinova Sp. z o. o.

85 -825 Bydgoszcz ul. Wojska Polskiego 65

tel. 52 561 67 10 fax. 52 561 67 11

E-mail: [sds@purinova.com](mailto:sds@purinova.com)

##### 1.4. Emergency telephone number

112 – emergency number

#### SECTION 2: Hazard identification:

##### 2.1. Classification of the substance or mixture

###### Classification in accordance with Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

##### 2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

##### 2.3. Other hazards

The substance does not fulfil the PBT criteria (not PBT) and not the vPvB criteria (not vPvB).

#### SECTION 3: Composition and information on ingredients

##### 3.1. Substances

Hazardous components	EC no.	CAS no.	Registration no.	Content %mass	Classification (EC) no 1272/2008
Diethylene glycol	203-872-2	111-46-6	01-2119457857-21-0022 01-2119457857-21-0020 01-2119457857-21-0005 01-2119457857-21-0004	≤ 5	Acute Tox. 4, H302

Other components are not classified as hazardous (polyester polyol ≥ 95 %).

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### Contact by inhalation

Inhalation of vapors - in normal use, there is no risk of harm to the respiratory system.

###### If swallowed

Rinse mouth and give plenty of water to drink. With long-term exposure to the product if you feel unwell, move to fresh air. If necessary, provide medical attention.

#### Skin contact

In case of contact with skin, remove contaminated cloth and wash skin with soap and water. Don't use solvents for this. In case of skin irritation provide medical attention.

#### Eye contact

In case of contact with eyes, arrange medical care, and by the time of arrival, immediately rinse for at least 15 minutes with plenty of cool fresh water (avoid strong flux due to the risk of mechanical damage to the cornea).

Note: people exposed to the contamination of eyes must be instructed on the necessity and method of immediate washing.

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

##### Inhalation

High vapour concentration of the heated product can cause mild irritation of air passages.

##### Skin contact

Prolonged contact can cause drying and mild skin irritation.

##### Eye contact

Liquid splashed into the eye may cause tearing, moderate irritation with prolonged contact

##### Ingestion

Can cause gastrointestinal disorders, central nervous system disorders, liver or kidney damage.

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

Symptomatic treatment. If swallowed, contact medical immediately and show the material safety data sheet.

### **SECTION 5: Firefighting measures.**

#### **5.1. Extinguishing media**

Product is not classified as combustible.

Recommended extinguishing media: carbon dioxide, dry chemical, foam.

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

Fire may produce dense smoke containing hazardous products of combustion - carbon and nitrogen oxides. Do not enter fire area without proper protection. Extinguish a fire from a safe distance, safety respiratory equipment may be required.

#### **5.3. Advice for firefighters**

Hazardous combustion products: carbon and nitrogen oxides. Incomplete combustion may lead to the formation of toxic pyrolysis products.

Personal protective equipment: helmet, face shield and neck, breathing apparatus, fire jacket and pants with stripes on arms, legs and waist, neoprene gloves.

### **SECTION 6: Accidental release measures**

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

Respiratory protection: When exposed to dangerous / unknown concentrations of vapors / mists and / or insufficient ventilation, wear an approved respirator with filter type A

Hand protection: Protective gloves resistant to the product - e.g., neoprene, nitrile

Body protection: protective clothing coated fabric, protective shoes.

Eye protection: goggles in a sealed enclosure (goggles) for activities involving the risk of splashing into the eye.

#### **6.2. Environmental precautions:**

Secure the spill site. Prevent spills from entering municipal sewers, ground and surface waters.

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

Collect spilt product covered with absorbent agent (e.g. sand, diatomaceous earth) with a shovel into tight containers. In the event of a major accident, the chemical rescue service and the competent environmental authority should be notified.

Sprinkle a slippery substrate with a layer of granular material or an absorption agent. Store the absorbents accordance with the applicable regulations.

#### **6.4. Reference to other sections**

Section 8 – personal protection

section 9 – chemical and physical properties  
 section 13 – disposal

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid prolonged contact with skin; Avoid contact with eyes; Avoid inhalation of vapors / mists. Ensure an adequate ventilation. Keep containers closed when not in use. Once opened, containers should be closed again and kept upright to prevent leakage.

Do not eat, drink or smoke in the workplace. Wash hands with soap and water after use. Do not use contaminated clothing

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

Store in a tightly closed container in a well ventilated area. Keep away from moisture. Store at 15 °C - 25 °C. Pour the contents of damaged/ leaking containers into corrosion-resistant containers.

### 7.3. Specific end uses

Use this product only in accordance with the application.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Limit values according current national regulations on the maximum permissible concentrations and intensities of harmful factors in the work environment

- Diethylene glycol CAS No.111-46-6

Country	Limit value - Eight hours		Limit value - Short term		Notes
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Australia	23	100			
Austria	10	44	40	176	
Denmark	2,5	11	5	22	
Germany (AGS)	10 <sup>(1)</sup>	44 <sup>(1)</sup>	40 <sup>(1)(2)</sup>	176 <sup>(1)(2)</sup>	<sup>(1)</sup> Inhalable aerosol and vapour <sup>(2)</sup> 15 minutes reference period
Germany (DFG)	10	44	40	176	
Ireland	23	100			
Latvia		10			
New Zealand	23	101			
Poland		10			
Romania	115	500	184 <sup>(1)</sup>	800 <sup>(1)</sup>	<sup>(1)</sup> 15 minutes average value
Sweden	10	45	20 <sup>(1)</sup>	90 <sup>(1)</sup>	<sup>(1)</sup> 15 minutes average value
Switzerland	10	44	40	176	
United Kingdom	23	101			

### 8.2. Exposure controls

Technical means of collective protection: ventilation

Appropriate personal protective equipment:

**Respiratory Protection:** Under normal conditions, with adequate ventilation is not required. When exposed to dangerous/unknown concentrations of vapors/mists and/or insufficient ventilation, wear an approved respirator with filter type A.

**Protection of hands:** Protective gloves resistant to the product - e.g., neoprene, nitrile

**Body protection:** Apron or protective clothing of coated fabrics, protective boots  
**Eye protection:** Safety glasses in a sealed enclosure (goggles) for activities involving the risk of splashing into the eye.

**Environmental exposure controls:** Avoid penetration into groundwater and sewage system.

## SECTION 9: Physical and chemical properties

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

Physical appearance	Liquid, color from yellow to brown
Odour	Irritant
Odour threshold	No data available
pH value	No data available
Melting / freezing point	No data available
Boiling point / boiling range	No data available
Flash point	164 °C
Evaporation rate	No data available
Flammability (solid state, gas)	Supporting combustion
Upper / lower flammability / explosion	No data available
Oxidizing properties	Not applicable
Vapour pressure	No data available
Vapour density	No data available
Relative density	1,13 g/cm <sup>3</sup> (25°C)
Solubility	Soluble in acetone and ethyl acetate
Partition coefficient n-octanol / water	No data available
Viscosity	500 – 1000 mPas (25°C)
Auto-ignition temperature	No data available
Decomposition temperature	No data available

### 9.2. Other information.

No data

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Slightly chemically reactive substance

### 10.2. Chemical stability

Hygroscopic substance.

### 10.3. Possibility of hazardous reactions

Not applicable.

### 10.4. Conditions to avoid

Not applicable

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

During a fire, a dangerous carbon oxides form.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**No experimental toxicological data on the substance/mixture. This health risk assessment is based on data available on diethylene glycol component (DEG) (CAS 111-46-6).**

Diethylene glycol is easily absorbed into the body from the gastrointestinal tract, and a lesser through skin and respiratory system (low volatility).

DEG can be metabolised by oxidation by alcohol dehydrogenase (ADH) to (2-hydroxyethoxy)-acetaldehyde, which is rapidly metabolised by aldehyde dehydrogenase (ALDH) to (2-hydroxyethoxy)acetic acid (HEAA).

It is eliminated from human body partially in unchanged form, remains in the form of a metabolite, (2-hydroxyethoxy)acetic acid (HEAA).

Acute toxicity

<b>diethylene glycol (CAS 111-46-6)</b>	
LD50, oral, rats	19600 mg/kg bw
LC50, inhalation, rats	>4.6 mg/L
LD50, dermal, rabbits	13300 mg/kg bw
Oral lethal dose for human	From 0.014 to 0.170 mg DEG/kg body weight

Oral acute toxicity: Classified as acute toxicity hazard Cat.4

Inhalation and dermal acute toxicity: Not classified

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity Genetic toxicity: Not classified

Carcinogenicity : Not classified

Toxicity for reproduction: Not classified

STOT-single exposure: Not available.

Repeated dose toxicity: Not classified

Aspiration hazard: Not available.

**SECTION 12. ECOLOGICAL INFORMATION**

**No experimental data on the mixture. This risk assessment is based on available data on diethylene glycol component diethylene glycol (CAS 111-46-6).**

**12.1. Toxicity**

- diethylene glycol (CAS 111-46-6)

<b>Fish (Short-term toxicity)</b>	
LC50 (96h)	75200 mg/L (Pimephales promelas)
<b>Fish (Long-term toxicity)</b>	
NOEC (28 d)	> 1500 mg/L (Pimephales promelas) (ASTM E-47.01, Draft No. 3, 1980)
NOEC (7 d)	15380 mg/L (Pimephales promelas) (EPA 600/4-89/001)
<b>Aquatic invertebrates (Short-term toxicity)</b>	
EC50 (24 h)	>10000 mg/L (Daphnia magna)( basic method for the implementation of DIN 38412/11)
<b>Aquatic invertebrates (Long-term toxicity)</b>	
NOEC (7 d)	8590 mg/L (Ceriodaphnia dubia) (EPA 600/4-89/001)
NOEC (21 d):	7500 - 15000 mg/L (Daphnia magna)(ASTM E-47.01 and E 35.21, Draft No. 1 and 4)
<b>Algae and aquatic plants</b>	
NOEC (72h)	>100 mg/L (Pseudokirchneriella subcapitata)( OECD Guideline 201)
LD50 (7d)	6 238 mg/L (Echinodorus cordifolius)
<b>Toxicity to aquatic micro-organisms</b>	
EC20 (30min)	> 1 995 mg/L (activated sludge, domestic)(ISO 8192)

**12.2. Persistence and degradability**

- **diethylene glycol (CAS 111-46-6)**

Abiotic degradation:	After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes. No data on hydrolysis are available. However, glycols are generally regarded as stable towards hydrolysis. <u>Phototransformation in air</u> : Half-life (DT50):17.2 h. After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes
Biodegradation	Readily biodegradable (according to OECD criteria). Diethylene glycol was shown to meet the ready biodegradability criteria in a carbon dioxide evolution test according to OECD 301B. % Degradation of test substance: 90 – 100% after 28d
Persistence and degradability	Not P/vP based on ready biodegradability: The substance is readily biodegradable according to OECD criteria.

### 12.3. Bioaccumulative potential

- **diethylene glycol (CAS 111-46-6)**

Aquatic bioaccumulation:	The substance has a log Kow value of ca. -1.5. Therefore, accumulation in organisms is not to be expected. Absence of bioaccumulation was also shown in a 3 -day BCF study with fish (L. idus) in which a BCF of 100 was observed (Freitag et al., 1985).
Secondary poisoning:	Based on the available information, there is no indication of a bioaccumulation potential and, hence, secondary poisoning is not considered relevant.

### 12.4. Mobility in soil

- **diethylene glycol (CAS 111-46-6)**

Substance is readily biodegradable.

### 12.5. Results of PBT and vPvB assessment

The substance does not fulfil the PBT criteria (not PBT) and not the vPvB criteria (not vPvB).

### 12.6. Other adverse effects

Not available.

## SECTION 13: Disposal consideration

### 13.1. Waste treatment methods

#### 13.1.1. Classification of formulation / packaging:

Product:

Wastes which are the remains of the product should be classified as non-hazardous.

Package:

Packages containing product should be treated as non-hazardous packaging.

#### 13.1.2. Treatment / Disposal:

Processing and disposal of waste should be in accordance with the applicable national law and European law<sup>1)</sup>.

#### 13.1.3. Sewage:

Waste, even in small amounts, should not be discharged into sewage, wastewater or water.

#### 13.1.4. Other recommendations

Waste management should be in accordance with the applicable national law and European law<sup>1)</sup>.

Waste resulting from the use of the product must be submitted by approved waste for recovery or disposal.

The obligation to correct handling of waste imposed on the manufacturer.

<sup>1)</sup> If the buyer is subject to the European Union.

## SECTION 14: Transport Information

### 14.1. UN (ONZ) number

Not applicable

#### 14.2. UN proper shipping name

Not applicable

#### 14.3. Transport hazard class:

It is not considered dangerous according to the provisions set forth in the transport rules IMO, ADR / RID, ICAO.

#### 14.4. Packing group

It is not considered dangerous according to the provisions set forth in the transport rules IMO, ADR / RID, ICAO.

#### 14.5. Environmental hazard

It is not considered dangerous according to the provisions set forth in the transport rules IMO, ADR / RID, ICAO.

#### 14.6. Special precautions for user

It is not considered dangerous according to the provisions set forth in the transport rules IMO, ADR / RID, ICAO.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

It is not considered dangerous according to the provisions set forth in the transport rules IMO, ADR / RID, ICAO.

### SECTION 15: Regulatory information.

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

##### Laws concerning the safety, health and environment specific for the substance or mixture:

Legal framework for all EU Member States:

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006. Concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008. On classification, labeling and packaging of substances and mixtures (CLP), amending and repealing Directives 67/548 / EEC and 1999/45 / EC and amending Regulation (EC) No 1907/2006.
- Regulation (EU) No 453/2010 of the Commission of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- Commission Regulation (EU) No 2015/830 of 28 May 2015. Amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- Regulation (EC) nr 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals.
- ADR

Important legal acts in force in Poland:

- The Act of 25 February 2011 on chemical substances and mixtures (Journal of Laws 2019, item 1225 as amended)
- Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines and containers and tanks used for storage or containing hazardous substances or mixtures (Journal of Laws 2015, item 1368 as amended)
- The Act of 19 August 2011 on the transport of dangerous goods (Journal of Laws 2018, item 169 as amended)
- Regulation of the Ministry of Labour and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws 2018, item 1286 as amended)

#### 15.2. Chemical safety assessment

Not applicable

### SECTION 16: Other information

The information contained in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless it is specified in the text.

Hazard statement:  
H302 Harmful if swallowed.

Changes at section: 9

End of Safety Data Sheet