POLARTHERM E40

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 14.04.2023 Revision date: 23.11.2023 Supersedes version of: 14.04.2023 Version: 2.0

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

1.1. Product identifier

Product form : Mixture

Trade name : POLARTHERM E40

Name : Polartherm E40

UFI : K2G8-YRSC-6U20-5HEM

Product code : 307960

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

Relevant identified uses

Use of the substance/mixture : Anti-Freeze and De-icing products
Heat Transfer Fluids

1.3. Details of the supplier of the safety data sheet

TELKO Oy

Keilaranta 17 ,P.O. Box 43

02151 Espoo - Suomi

Tel.: +358 9 5211

SDS@telko.com - https://www.telko.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Denmark	Giftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23 2400 København NV	+45 82 12 12 12	
Estonia	Mürgistusteabekeskus	Paldiski mnt 81 10614 Tallinn	16662; +372 7943 794 +372 626 93 90	Calling the hotline is anonymous and at the cost of a local call.
Finland	Myrkytystietokeskus	Stenbäckinkatu 9 PO BOX 100 29 Helsinki	+358 9 471 977 +358 800 147 111	
Latvia	Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs	Hipokrāta 2 1038 Rīga	+371 67 04 24 73	
Latvia	Valsts ugunsdzēsības un glābšanas dienests		112	
Lithuania	Apsinuodijimų informacijos biuras	Birutės g. 56 8110 Vilnius	+370 5 236 20 52 +370 687 53378	
Norway	Giftinformasjonen Helsedirektoratet	P.O. Box 7000 St. Olavs Plass 130 Oslo	+47 22 591300	
Poland	Pomorskie Centrum Toksykologii Szpital MSWiA	Ul. Kartuska 4/6 80-104 Gdańsk	+48 58 682 04 04 +48 58 309 83 83	
Poland	National Poisons Information Centre The Nofer Institute of Occupational Medicine (Łódź)	ul. Teresy 8 P.O. BOX 199 90950 Łódź	+48 42 63 14 724	
Poland	Acute Poisonings Unit Jan Bozy Regional Hospital	Biernackiego 9 20089 Lublin	+48 81 740 2675 +48 81 740 2676	
Poland	Oddział Toksykologii i Chorób Wewnętrznych Dolnośląski Szpital Specjalistyczny im. T. Marciniaka - Centrum Medycyny Ratunkowej Department of Occupational Diseases & Toxicology	Szpital im. F. Raszei w Poznaniu, ul. Mickiewicza 2 60 834 Poznan	+48 61 84 769 46	
Poland	Intensive Care Unit and Centre for Acute Poisonings	Regional Hospital No 2 Lwówska 60 35301 Rzeszów	+48 17 86 64 000 +48 17 86 64 404	

Poland	Regionalny Osrodek Ostrych Zatruc Regional Poisons Centre, Instytutu Medycyny Pracy i Zdrowia Srodowiskowego	UL Koscielna 13 41-200 Sosnowiec	+48 32 266 11 45	
Poland	Oddział Chorób Wewnętrznych – Pododdział Toksykologii Szpital Praski p.w. Przemienienia Pańskiego Sp. z o.o.	Aleja Solidarności 67 03-401 Warszawa	+48 22 619 66 54 +48 22 619 08 97	
Poland	Lower Silesian Poisons and Toxicilogical Information Centre Acute Poisonings Unit (Oddzial Ostrych Zatruc), SPZOZ Dolnoslaski Szpital Specjalistycznym	T. Marciniaka ul. Traugutta 116 50-420 Wroclaw	+48 71 343 30 08 +48 71 789 02 14	
Poland	Pracownia Informacji Toksykologicznej i Analiz Laboratoryjnych Uniwersytetu Jagiellońskiego - Collegium Medicum	ul. Kopernika 15 III piętro, pok. 329, 330 31-501 Kraków	+48 12 411 99 99	
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112 – begär Giftinformation +46 10 456 6700 (Från utlandet)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Reproductive toxicity, Category 1B	H360D
Specific target organ toxicity – Repeated exposure, Category 2	H373

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. May damage the unborn child. May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07 GHS08

Signal word (CLP) : Danger

Contains : monoethylene glycol, sodium 2-ethylhexanoate

Hazard statements (CLP) :
H302 - Harmful if swallowed.
H360D - May damage the unborn child.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

Precautionary statements (CLP) :
P201 - Obtain special instructions before use.
P260 - Do not breathe gas, fume, mist, vapours.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Extra phrases : Restricted to professional users.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanediol; ethylene glycol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28	30-40	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT RE 2, H373
Sodium 2-ethylhexanoate	(CAS-No.) 19766-89-3 (EC-No.) 243-283-8 (REACH-no) 01-2119979083-31	1-3	Repr. 1B, H360D
Methyl-1H-benzotriazole	(CAS-No.) 29385-43-1 (EC-No.) 249-596-6 (REACH-no) 01-2119979081-35	<0,1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Repr. 2, H361d Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell. Prevent cooling by covering the victim (no warming up). Keep the victim calm, avoid physical strain. Keep watching the victim. Delayed adverse effects possible.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Take off contaminated clothing and wash it before reuse. Wash skin thoroughly with mild soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get immediate medical advice/attention.

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

Symptoms/effects after inhalation : None under normal use. In the event of exposure to high concentrations : Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. Nausea. Vomiting. Weakness. Visual disturbances. Mental confusion.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : May be harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Alcohol-resistant foam. Carbon dioxide.

Unsuitable extinguishing media	: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon oxides (CO, CO2). Organic compounds. Aldehydes. ketones.

5.3. Advice for firefighters

Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Prevent unauthorised access. Prevent fire fighting water from entering the environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Handle in accordance with good industrial hygiene and safety practice.

For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Do not breathe vapours, spray, mist. Eliminate all ignition sources if safe to do so.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Stop leak if safe to do so. Avoid release to the environment. Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material. Use non-sparking tools. Put into a labelled container and provide safe disposal. Clean contaminated surfaces with an excess of water. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8 for information on personal protection equipment. See Section 7 for information on safe handling. See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours, spray, mist. Handle and open container with care. Handle uncleaned empty containers as full ones. Handle in accordance with good industrial hygiene and safety procedures.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible materials	: Refer to Section 10 on Incompatible Materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethanediol, ethylene glycol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	**Ethylene glycol**
IOEL TWA	**52 mg/m³**
IOEL TWA [ppm]	**20 ppm**
IOEL STEL	**104 mg/m³** **104 mg/m³**
IOEL STEL [ppm]	**40 ppm** **40 ppm**
Remark	**Skin** **Skin**
Regulatory reference	**COMMISSION DIRECTIVE 2000/39/EC** **COMMISSION DIRECTIVE 2000/39/EC**
Denmark - Occupational Exposure Limits	
Local name	**Ethylenglycol (1,2-Ethandiol; Glycol)**
OEL TWA [1]	**26 mg/m³** **10 mg/m³ forstøvet**
OEL TWA [2]	**10 ppm**
Remark	**E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden)**
Regulatory reference	**BEK nr 2203 af 29. november 2021**
Estonia - Occupational Exposure Limits	
Local name	**1,2-etaandiool (etüleenglükool)**
OEL TWA	**52 mg/m³**
OEL TWA	**20 ppm**
OEL STEL	**104 mg/m³**
OEL STEL	**40 ppm**
Remark	**A (Naha kaudu kergesti imenduv aine), 18 (Piirnorm kehtib auru ja aerosooli summaarse sisalduse kohta)**
Regulatory reference	**Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)**
Finland - Occupational Exposure Limits	

ethanediol, ethylene glycol (107-21-1)	
Local name	**1,2-Etaanidioli**
HTP (OEL TWA) [1]	**50 mg/m³**
HTP (OEL TWA) [2]	**20 ppm**
HTP (OEL STEL)	**100 mg/m³**
HTP (OEL STEL) [ppm]	**40 ppm**
Remark	**Iho**
Regulatory reference	**HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)**
Latvia - Occupational Exposure Limits	
Local name	**Etilēnglikols, (1,2-etāndiols)**
OEL TWA	**52 mg/m³**
OEL TWA	**20 ppm**
OEL STEL	**104 mg/m³**
OEL STEL	**40 ppm**
Remark	**Āda**
Regulatory reference	**Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325**
Lithuania - Occupational Exposure Limits	
Local name	**Etilenglikolis (1,2-etandiolis, glikolis)**
IPRV (OEL TWA)	**25 mg/m³**
IPRV (OEL TWA) [ppm]	**10 ppm**
TPRV (OEL STEL)	**50 mg/m³**
TPRV (OEL STEL) [ppm]	**20 ppm**
Remark	**O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą); Šis RD taikomas bendrai garų ir aerozolio koncentracijai.**
Regulatory reference	**LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)**
Poland - Occupational Exposure Limits	
Local name	**Glikol etylenowy**
NDS (OEL TWA)	**15 mg/m³**
NDSCh (OEL STEL)	**50 mg/m³**

ethanediol, ethylene glycol (107-21-1)	
Remark	**Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).**
Regulatory reference	**Dz. U. 2018 poz. 1286**
Romania - Occupational Exposure Limits	
Local name	**Etilenglicol/Etandiol**
OEL TWA	**52 mg/m³**
OEL TWA	**20 ppm**
OEL STEL	**104 mg/m³**
OEL STEL	**40 ppm**
Remark	**P - posibilitatea unei penetrări cutanate importante**
Regulatory reference	**Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)**
Sweden - Occupational Exposure Limits	
Local name	**Etylenglykol (Glykol)**
NGV (OEL TWA)	**25 mg/m³**
NGV (OEL TWA) [ppm]	**10 ppm**
KTV (OEL STEL)	**104 mg/m³**
KTV (OEL STEL) [ppm]	**40 ppm**
Remark	**H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga); 26 (Gränsvärdet gäller den sammanlagda koncentrationen av ånga och aerosol)**
Regulatory reference	**Hygieniska gränsvärden (AFS 2018:1)**
Norway - Occupational Exposure Limits	
Local name	**1,2-etandiol (Etylenglykol)**
Grenseverdi (OEL TWA) [1]	**52 mg/m³**
Grenseverdi (OEL TWA) [2]	**20 ppm**
Korttidsverdi (OEL STEL)	**104 mg/m³**
Korttidsverdi (OEL STEL) [ppm]	**40 ppm**
Remark	**H: Kjemikalier som kan tas opp gjennom huden; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet; 5) Grenseverdien er basert på beregning av summen av gass- og partikkelform (aerosol) av stoffet.**

ethanediol, ethylene glycol (107-21-1)	
Regulatory reference	**FOR-2021-06-28-2248**

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC

ethanediol, ethylene glycol (107-21-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	106 mg/kg bodyweight/day
Long-term - local effects, inhalation	35 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, dermal	53 mg/kg bodyweight/day
Long-term - local effects, inhalation	7 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC aqua (intermittent, marine water)	10 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	37 mg/kg dwt
PNEC sediment (marine water)	3,7 mg/kg dwt
PNEC (Soil)	
PNEC soil	1,53 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199,5 mg/l

Sodium 2-ethylhexanoate (19766-89-3)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	14 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1 mg/kg bodyweight/day

Long-term - systemic effects, inhalation	3,5 mg/m³
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,36 mg/l
PNEC aqua (marine water)	0,036 mg/l
PNEC aqua (intermittent, freshwater)	0,493 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,301 mg/kg dwt
PNEC sediment (marine water)	0,0301 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,0579 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	71,7 mg/l

Methyl-1H-benzotriazole (29385-43-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0,3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	21,2 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,01 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	350 µg/m³
Long-term - systemic effects, dermal	0,01 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,008 mg/l
PNEC aqua (marine water)	20 µg/l
PNEC aqua (intermittent, freshwater)	0,086 mg/l
PNEC aqua (intermittent, marine water)	53 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,117 mg/kg dwt
PNEC sediment (marine water)	0,292 mg/kg dwt
PNEC (Soil)	
PNEC soil	18,7 µg/kg dw

PNEC (STP)	
PNEC sewage treatment plant	39,4 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:					
Protective gloves. Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions. The breakthrough time of the selected gloves must be greater than the intended use period. Gloves must be replaced after each use and whenever signs of wear or perforation appear					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Chemically resistant protective gloves	Nitrile rubber, Neoprene rubber (HNBR), Butyl rubber, Viton	6 (> 480 minutes)	≥0,38		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:
Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately. Provide readily accessible eye wash stations and safety showers.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	red.
Odour	:	Mild odor.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	< -24 °C
Boiling point or initial boiling point and boiling range	:	> 100 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	≈ 8,7
Viscosity, kinematic	:	Not available
Solubility	:	Water: Soluble
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1,056 g/cm³ (20°C)
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

NOTES:

Statements:	Reason:
No data available	The product has not been tested
Not applicable	Due to physical state and/or other relating physical and chemical properties

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition. Keep out of direct sunlight.

10.5. Incompatible materials
Combustible materials. Strong acids. Strong oxidizing agents. Strong bases. Zinc. Nitrates. Peroxides. Chlorates.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : Carbon oxides (CO, CO2). Aldehydes. ketones.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

ethanediol, ethylene glycol (107-21-1)	
LD50 oral rat	**7712 mg/kg bodyweight**
LD50 dermal	**> 3500 mg/kg (mouse)**
LC50 Inhalation - Rat	**> 2,5 mg/l (6 h)**

Sodium 2-ethylhexanoate (19766-89-3)	
LD50 oral rat	**2043 mg/kg bodyweight (OECD 401; 95% CL: 1445 - 2890)**
LD50 dermal rat	**> 2000 mg/kg bodyweight (OECD 402)**

Methyl-1H-benzotriazole (29385-43-1)	
LD50 oral rat	**≈ 720 mg/kg bodyweight (OECD 401; 95% CL: 700 - 800)**
LD50 dermal rabbit	**> 2000 mg/kg bodyweight (OECD 402)**

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ≈ 8,7

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ≈ 8,7

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : May damage the unborn child.

Methyl-1H-benzotriazole (29385-43-1)	
LOAEL, rat	30 mg/kg bw/day (OECD 414)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

ethanediol, ethylene glycol (107-21-1)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day
STOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2 Other information

Other information : This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 ml for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

ethanediol, ethylene glycol (107-21-1)	
LC50 - Fish [1]	72860 mg/l (Pimephales promelas)
EC50 - Crustacea [1]	> 100 mg/l (Daphnia magna)

Sodium 2-ethylhexanoate (19766-89-3)	
LC50 - Fish [1]	> 100 mg/l (Oryzias latipes)
EC50 - Crustacea [1]	910 mg/l (Daphnia magna)
EC50 72h - Algae [1]	49,3 mg/l (Desmodesmus subspicatus)
LOEC (chronic)	63 mg/l (Daphnia magna, 21 days)
NOEC (chronic)	25 mg/l (Daphnia magna, 21 days)

Methyl-1H-benzotriazole (29385-43-1)	
LC50 - Fish [2]	180 mg/l (Danio rerio) (Fresh water)
EC50 - Crustacea [1]	8,58 ml/l (Daphnia galeata) (Fresh water)
EC50 - Crustacea [2]	55 mg/l (Arcartia tonsa) (marine water)
EC50 72h - Algae [2]	75 mg/l (Pseudokirchneriella subcapitata) (Fresh water)

12.2. Persistence and degradability

POLARTHERM E40	
Persistence and degradability	Expected to be biodegradable.

ethanediol, ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	90 – 100 % (10 days)

12.3. Bioaccumulative potential

POLARTHERM E40	
Bioaccumulative potential	Bioaccumulation unlikely.

ethanediol, ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water (Log Pow)	-1,36 (25 °C)
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

POLARTHERM E40	
Ecology - soil	Liquid. Soluble in water.

12.5. Results of PBT and vPvB assessment

POLARTHERM E40
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Hazardous waste. Do not dispose of with domestic waste. Recycling is preferred to disposal or incineration. Dispose in a safe manner in accordance with local/national regulations.

Product/Packaging disposal recommendations : Empty the packaging completely prior to disposal. Do not burn empty packaging. Do not cut using a blowtorch. Handle uncleaned empty containers as full ones. Do not re-use empty containers without proper cleaning or reconditioning. Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment. Do not allow into drains or water courses.

European List of Waste (LoW, EC 2000/532) : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	**IMDG**	**IATA**	**ADN**	**RID**
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	POLARTHERM E40 ; ethanediol, ethylene glycol ; Methyl-1H-benzotriazole	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Methyl-1H-benzotriazole	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
30.	POLARTHERM E40	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

15.1.2. National regulations

Latvia

Latvian National Regulations : **Cabinet Regulation No. 302, adopted 19 April 2011 "Regulations Regarding Waste Classification and Properties Rendering Waste Hazardous".**

Cabinet Regulation No. 325, adopted 15 May 2007 "Labour Protection Requirements when Coming in Contact with Chemical Substances at Workplaces".

Cabinet Regulation No. 494, adopted 7 August 2018 "Waste shipment accounting procedures".

Cabinet Regulation No. 795, adopted 22 December 2015 "Procedures for Registration of Chemical Substances and Mixtures and Their Database".

Denmark

Danish National Regulations : **Young people below the age of 18 years are not allowed to use the product**

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for one or more of substances within this mixture. A chemical safety assessment has not been carried out for the mixture itself.

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
	Supersedes	Added	
	Revision date	Added	
1.1	UFI on SDS 1.1	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.2	Extra phrases	Added	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
2.2	Signal word (CLP)	Modified	
3	Composition/information on ingredients	Modified	
6.2	Environmental precautions	Modified	
6.3	Methods for cleaning up	Modified	
6.4	Reference to other sections (8, 13)	Modified	
7.1	Hygiene measures	Modified	
7.2	Storage conditions	Modified	
8.2	Other information	Modified	
8.2	Hand protection	Modified	
11.1	Reason for no classification	Added	
11.1	Other information	Modified	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	

11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	ATE CLP (oral)	Added	
15.1	REACH Annex XVII	Modified	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
ED	Endocrine disrupting properties
IARC	International Agency for Research on Cancer
IOELV	Indicative Occupational Exposure Limit Value
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development

STP	Sewage treatment plant
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
ThOD	Theoretical oxygen demand (ThOD)
VOC	Volatile Organic Compounds

Data sources : ECHA (European Chemicals Agency). Classification in accordance with the calculation methods of Regulation (EC) 1272/2008 CLP.

Training advice : Read carefully and follow all instructions.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
H302	Harmful if swallowed.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

SDS EU (REACH Annex II) - Telko

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.