

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

Product form : Mixture
Product name : Polarshine 45

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Polishing agent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Mirka Ltd
Pensalavägen 210, 66850 Jeppo, Finland
Telephone: +358 20 760 2111
E-mail: sales@mirka.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency: spill, leak, fire, exposure or accident call CHEMTREC day or night:

Within USA and Canada: +1 800 424 9300
Outside USA and Canada: +1 703 527 3887 (collect calls accepted)
CHEMTREC UK: +(44)-870-8200418 (English)
CHEMTREC Ireland (Dublin): +(353)-19014670 (English, Irish Gaelic)
Multilingual response for emergency calls only. Non-emergency calls cannot be serviced at these numbers.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

EUH-statements : EUH066 - Repeated exposure may cause skin dryness or cracking.
EUH208 - Contains 1,2-Benzisothiazol-3(2H)-one. May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

Other hazards not contributing to the classification : May degrease the skin. Dried out product can release dust. High concentrations of dust may cause respiratory irritation.

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

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium oxide	(CAS-No.) 1344-28-1 (EC No.) 215-691-6 (REACH-no) 01-2119529248-35-XXXX	20 - 40	Not classified
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	(EC No.) 918-481-9 (REACH-no) 01-2119457273-39-XXXX	10 - 20	Asp. Tox. 1, H304
White mineral oil (petroleum)	(CAS-No.) 8042-47-5 (EC No.) 232-455-8 (REACH-no) 01-2119487078-27-XXXX	10 - 20	Asp. Tox. 1, H304
Terpineol	(CAS-No.) 8000-41-7 (EC No.) 232-268-1 (REACH-no) 01-2119553062-49-XXXX	1 - < 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Glycerol	(CAS-No.) 56-81-5 (EC No.) 200-289-5	0.1 - < 1	Not classified
1,2-Benzisothiazol-3(2H)-one	(CAS-No.) 2634-33-5 (EC No.) 220-120-9 (EC index No.) 613-088-00-6 (REACH-no) 01-2120761540-60-XXXX	< 0.05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Isopentyl acetate	(CAS-No.) 123-92-2 (EC No.) 204-662-3 (EC index No.) 607-130-00-2	< 0.1	Flam. Liq. 3, H226
Sodium hydroxide	(CAS-No.) 1310-73-2 (EC No.) 215-185-5 (EC index No.) 011-002-00-6 (REACH-no) 01-2119457892-27-XXXX	< 0.1	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Ethyl acetate	(CAS-No.) 141-78-6 (EC No.) 205-500-4 (EC index No.) 607-022-00-5 (REACH-no) 01-2120063205-65-XXXX	< 0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. If symptoms develop, obtain medical attention.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash 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	: Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Do not give an unconscious person anything to drink. If symptoms develop, obtain medical attention.

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

Symptoms/effects after inhalation	: Dried out product can release dust. High concentrations of dust may cause respiratory irritation.
Symptoms/effects after skin contact	: May degrease the skin. Repeated exposure may cause skin dryness or cracking. Skin contact may produce an allergic reaction in sensitive individuals.

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	: Foam. Dry powder. Water spray. Carbon dioxide.
Unsuitable extinguishing media	: Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid and vapour. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.
Explosion hazard	: On heating : May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	: Fire may produce irritating, corrosive and/or toxic gases. Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

Precautionary measures fire	: Keep upwind. Do not breathe fumes from fires or vapours from decomposition. Exercise caution when fighting any chemical fire.
Firefighting instructions	: Move containers from fire area if you can do it without risk. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water entering the environment.
Protection during firefighting	: As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid inhalation of dust from dried product.
------------------	--

6.1.1. For non-emergency personnel

Emergency procedures	: Remove all sources of ignition. Ventilate area. Avoid inhalation of vapours. Avoid contact with skin and eyes. Evacuate unnecessary personnel.
----------------------	--

6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required. See Section 8.
Emergency procedures	: Remove all sources of ignition. Ventilate area. Avoid inhalation of vapours. Avoid contact with skin and eyes.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if large amounts of the product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak, if possible without risk. Dam up the liquid spill.
Methods for cleaning up	: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dispose in a safe manner in accordance with local/national regulations. Wash spill area with soapy water.
Other information	: Caution : this product can cause the floor to be slippery.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Provide good ventilation in process area to prevent formation of vapour. Use solvent resistant equipment. Avoid contact with skin and eyes. Avoid inhalation of vapours. Avoid inhalation of dust from dried product.
- Hygiene measures : Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Floors should be impervious, resistant to liquids and easy to clean. Do not allow material to contaminate ground water system. Keep only in the original container in a cool, well ventilated place away from : Incompatible materials. Keep container tightly closed. Protect against frost. Do not allow product to dry out.
- Incompatible materials : Oxidising agents.

7.3. Specific end use(s)

Polishing agent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol (56-81-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Glycerol
WEL TWA (mg/m ³)	10 mg/m ³ mist
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

White mineral oil (petroleum) (8042-47-5)	
EU - Occupational Exposure Limits	
Local name	Mineral oils (AHRMO)
IOELV TWA (mg/m ³)	5 mg/m ³ (inhalable fraction)
Notes	(Year of adoption 2010)
Regulatory reference	SCOEL Recommendations
Ireland - Occupational Exposure Limits	
Local name	Mineral oil
OEL (8 hours ref) (ppm)	5 ppm Pure, Highly & Severely Refined (Inhalable)
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Sodium hydroxide (1310-73-2)	
Ireland - Occupational Exposure Limits	
Local name	Sodium hydroxide
OEL (15 min ref) (mg/m ³)	2 mg/m ³
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom - Occupational Exposure Limits	
Local name	Sodium hydroxide
WEL STEL (mg/m ³)	2 mg/m ³
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

Aluminium oxide (1344-28-1)	
Ireland - Occupational Exposure Limits	
Local name	Aluminium oxides
OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
Local name	Aluminium oxides
WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Ethyl acetate (141-78-6)	
EU - Occupational Exposure Limits	
Local name	Ethyl acetate
IOELV TWA (mg/m ³)	734 mg/m ³
IOELV TWA (ppm)	200 ppm
IOELV STEL (mg/m ³)	1468 mg/m ³
IOELV STEL (ppm)	400 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Ireland - Occupational Exposure Limits	
Local name	Ethyl acetate
OEL (8 hours ref) (mg/m ³)	734 mg/m ³
OEL (8 hours ref) (ppm)	200 ppm
OEL (15 min ref) (mg/m ³)	1468 mg/m ³
OEL (15 min ref) (ppm)	400 ppm
Notes (IE)	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom - Occupational Exposure Limits	
Local name	Ethyl acetate
WEL TWA (mg/m ³)	734 mg/m ³
WEL TWA (ppm)	200 ppm
WEL STEL (mg/m ³)	1468 mg/m ³

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Ethyl acetate (141-78-6)	
WEL STEL (ppm)	400 ppm
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

Isopentyl acetate (123-92-2)	
EU - Occupational Exposure Limits	
Local name	Isopentylacetate
IOELV TWA (mg/m ³)	270 mg/m ³
IOELV TWA (ppm)	50 ppm
IOELV STEL (mg/m ³)	540 mg/m ³
IOELV STEL (ppm)	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Ireland - Occupational Exposure Limits	
Local name	Isopentyl acetate
OEL (8 hours ref) (mg/m ³)	260 mg/m ³
OEL (8 hours ref) (ppm)	50 ppm
OEL (15 min ref) (mg/m ³)	520 mg/m ³
OEL (15 min ref) (ppm)	100 ppm
Notes (IE)	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
EU - Occupational Exposure Limits	
Manufacturer assigned exposure limit(s)	TWA: 1200 mg/m ³

Dust	
Ireland - Occupational Exposure Limits	
Local name	Dusts non-specific
OEL (8 hours ref) (mg/m ³)	4 mg/m ³ respirable 10 mg/m ³ total inhalable
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom - Occupational Exposure Limits	
Local name	Dust
WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

White mineral oil (petroleum) (8042-47-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	220 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	160 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	40 mg/kg bodyweight/day

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Long-term - systemic effects, inhalation	35 mg/m ³
Long-term - systemic effects, dermal	92 mg/kg bodyweight/day

Sodium hydroxide (1310-73-2)

DNEL/DMEL (Workers)

Long-term - local effects, inhalation	1 mg/m ³
---------------------------------------	---------------------

DNEL/DMEL (General population)

Long-term - local effects, inhalation	1 mg/m ³
---------------------------------------	---------------------

Terpineol (8000-41-7)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	6.35 mg/kg bodyweight/day
--------------------------------------	---------------------------

Long-term - systemic effects, inhalation	44.8 mg/m ³
--	------------------------

DNEL/DMEL (General population)

Long-term - systemic effects, oral	0.42 mg/kg bodyweight/day
------------------------------------	---------------------------

Long-term - systemic effects, inhalation	7.96 mg/m ³
--	------------------------

Long-term - systemic effects, dermal	2.29 mg/kg bodyweight/day
--------------------------------------	---------------------------

PNEC (Water)

PNEC aqua (freshwater)	12 µg/l
------------------------	---------

PNEC aqua (marine water)	1.2 µg/l
--------------------------	----------

PNEC (Sediment)

PNEC sediment (freshwater)	0.263 mg/kg dwt
----------------------------	-----------------

PNEC sediment (marine water)	0.026 mg/kg dwt
------------------------------	-----------------

PNEC (Soil)

PNEC soil	0.045 mg/kg dwt
-----------	-----------------

PNEC (Oral)

PNEC oral (secondary poisoning)	16.6 mg/kg food
---------------------------------	-----------------

PNEC (STP)

PNEC sewage treatment plant	2.57 mg/l
-----------------------------	-----------

8.2. Exposure controls

Appropriate engineering controls:

Provide adequate ventilation to minimise dust and/or vapour concentrations. Ensure exposure is below occupational exposure limits (where available). Local exhaust ventilation (LEV) may be required to control inhalation exposure. EN 482: Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents.

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

In case of repeated or prolonged contact wear gloves. Butyl rubber: Material thickness: > 0.11 mm, Breakthrough time: > 480 minutes. Standard EN 374 - Protective gloves against chemicals. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

Eye protection:

If there is a risk of liquid being splashed : Safety glasses. Standard EN 166 - Personal eye-protection.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin and body protection:

Long-sleeved protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Short term exposure: Combined gas/dust mask with filter type A/P1. Standard EN 14387 - Gas filter(s), combined filter(s). Long term exposure: Wear a self contained breathing apparatus

Thermal hazard protection:

Not required for normal conditions of use.

Environmental exposure controls:

Avoid release to the environment. Ensure that the emission levels from local regulations or operating permits are not exceeded.

Other information:

Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: White.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 2.5 – 4.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 65 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 1.23 (Water = 1)
Density	: ≈ 1.23 g/ml
Solubility	: Water: Dispersible
Log Pow	: No data available
Viscosity, kinematic	: > 20.5 mm ² /s (40 °C)
Viscosity, dynamic	: No data available
Explosive properties	: On heating : May form flammable/explosive vapour-air mixture.
Oxidising properties	: Not oxidising.
Explosive limits	: No data available

9.2. Other information

VOC content : ≈ 16.8 % (Directive 2010/75/EU)

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7). Combustible liquid.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

On heating : May form flammable/explosive vapour-air mixture. May react violently with oxidants.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not allow product to dry out.

10.5. Incompatible materials

Oxidising agents.

10.6. Hazardous decomposition products

Fire may produce irritating, corrosive and/or toxic gases. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

1,2-Benzisothiazol-3(2H)-one (2634-33-5)

LD50 oral, rat	490 mg/kg bodyweight (OECD 401 method)
LD50 dermal, rat	> 2000 mg/kg bodyweight (OECD 402 method)

Glycerol (56-81-5)

LD50 oral, rat	27200 mg/kg
LD50 dermal	56750 mg/kg (Guinea pig)
LC50 inhalation, rat (mg/l)	> 2.75 mg/l - 4 Hours

White mineral oil (petroleum) (8042-47-5)

LD50 oral, rat	> 5000 mg/kg
LD50 dermal, rabbit	> 2000 mg/kg
LC50 inhalation, rat (mg/l)	> 5 mg/l 4 Hours

Aluminium oxide (1344-28-1)

LD50 oral, rat	> 5000 mg/kg bodyweight
LC50 inhalation, rat (Dust/Mist - mg/l/4h)	> 2.3 mg/l - 4 Hours (OECD 403 method)

Ethyl acetate (141-78-6)

LD50 dermal, rabbit	> 20000 mg/kg
LC50 inhalation, rat (ppm)	> 6000 ppm - 6 Hours

Isopentyl acetate (123-92-2)

LD50 oral, rat	7400 mg/kg bodyweight
----------------	-----------------------

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LD50 oral, rat	> 5000 mg/kg (OECD 401 method), (Read-across)
LD50 dermal, rabbit	> 5000 mg/kg (OECD 403 method), (Read-across)
LC50 inhalation, rat (mg/l)	> 5000 mg/m ³ - 4 Hours, vapours (OECD 403 method), (Read-across)

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin corrosion/irritation	: Not classified pH: 2.5 – 4.5
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified pH: 2.5 – 4.5
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Polarshine 45

Viscosity, kinematic	> 20.5 mm ² /s (40 °C)
----------------------	-----------------------------------

Potential adverse human health effects and symptoms	: Repeated exposure may cause skin dryness or cracking. Skin contact may produce an allergic reaction in sensitive individuals. May degrease the skin. Dried out product can release dust. High concentrations of dust may cause respiratory irritation.
---	--

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

1,2-Benzisothiazol-3(2H)-one (2634-33-5)

LC50 fish	2.15 mg/l - 96 Hours (Onchorynchus mykiss), (OECD 203 method)
EC50 Daphnia	2.9 mg/l - 48 Hours (Daphnia magna), (OECD 202 method)
ErC50 (algae)	110 µg/L - 72 Hours (Pseudokirchneriella subcapitata), (OECD 201 method)
NOEC, algae	40.3 µg/l (72 Hours, Pseudokirchneriella subcapitata, Growth rate (OECD 201 method))

Glycerol (56-81-5)

LC50 fish	54000 mg/l - 96 Hours (Salmo gairdneri)
EC50 Daphnia	1955 mg/l - 48 Hours (Daphnia magna)

White mineral oil (petroleum) (8042-47-5)

LL50, fish, acute	> 10000 mg/l (96 Hours, Leuciscus idus melanotus, WAF (Water Accommodated Fraction) (OECD 203 method))
-------------------	--

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

LL50, aquatic invertebrates, acute	> 100 mg/l (48 Hours, Daphnia magna, Mobility, WAF (Water Accommodated Fraction) (OECD 202 method))
------------------------------------	---

Sodium hydroxide (1310-73-2)

LC50 fish	35 – 189 mg/kg
EC50 Daphnia	40.4 mg/l - 48 Hours (Daphnia magna)

Ethyl acetate (141-78-6)

LC50 fish	230 mg/l - 96 Hours (Pimephales promelas)(US EPA E03-05)
EC50 72h algae (1)	> 100 mg/l - 72 Hours (Desmodesmus subspicatus, Growth rate) (OECD 201 method)
NOEC chronic fish	> 100 mg/l - 72 Hours (Desmodesmus subspicatus)
NOEC chronic crustacea	2.4 mg/l - 21 days (Daphnia magna)(OECD 211 method)

Isopentyl acetate (123-92-2)

LC50 fish	11.1 mg/l - 96 Hours (Danio rerio), (OECD 203 method)
EC50 Daphnia	26.3 mg/l - 48 Hours (Daphnia magna, immobilisation), (OECD 202 method)
ErC50 (algae)	> 100 mg/l - 48 Hours (Desmodesmus subspicatus), (OECD 201 method)

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LL50, fish, acute	> 1000 mg/l (96 Hours, Oncorhynchus mykiss, WAF (Water Accommodated Fraction) (OECD 203 method))
NOELr, fish, Chronic	0.101 mg/l (28 days, Oncorhynchus mykiss, Growth rate (QSAR))
LL50, aquatic invertebrates, acute	> 10000 mg/l (48 Hours, Chaetogammarus marinus, WAF (Water Accommodated Fraction))
LL50, aquatic invertebrates, acute	> 1000 mg/l (48 Hours, Daphnia magna, Mobility, WAF (Water Accommodated Fraction) (OECD 202 method))
NOELr, aquatic invertebrates, Chronic	0.176 mg/l (21 days, Daphnia magna, reproduction (QSAR))
EL50, algae, acute	> 1000 mg/l (72 Hours, Pseudokirchneriella subcapitata, Growth rate/cell numbers (OECD 201 method))
NOELr, algae	1000 mg/l (72 Hours, Pseudokirchneriella subcapitata, Growth rate/cell numbers (OECD 201 method))

12.2. Persistence and degradability

Polarshine 45

Persistence and degradability	No information available.
-------------------------------	---------------------------

1,2-Benzisothiazol-3(2H)-one (2634-33-5)

Persistence and degradability	Not readily biodegradable.
-------------------------------	----------------------------

Glycerol (56-81-5)

Persistence and degradability	Readily biodegradable.
Biodegradation	94 % - 24 days

Aluminium oxide (1344-28-1)

Persistence and degradability	Not relevant for inorganic substances.
-------------------------------	--

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Terpineol (8000-41-7)	
Persistence and degradability	Readily biodegradable.
Biodegradation	80 % - 28 days (OECD 310 method)

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
Persistence and degradability	Readily biodegradable.
Biodegradation	89.8 % - 28 days

12.3. Bioaccumulative potential

Polarshine 45	
Bioaccumulative potential	No information available.

1,2-Benzisothiazol-3(2H)-one (2634-33-5)	
BCF fish 1	6.62 - 3 weeks (Lepomis macrochirus, Whole body), (OECD 305 method)
Log Pow	0.7 (20 °C, pH 7, EU method A.8)
Bioaccumulative potential	Not expected to bioaccumulate.

Glycerol (56-81-5)	
Log Pow	-1.75 (25 °C), (OECD 107 method)

White mineral oil (petroleum) (8042-47-5)	
BCF fish 1	0.4 – 10900 l/kg (20 °C, pH: 7), (QSAR)
Log Pow	4.3 – 18.02 (20 °C, pH: 7), (QSAR)

Isopentyl acetate (123-92-2)	
BCF fish 1	1.45 (calculated value)
Log Pow	2.7 (35 °C), (OECD 117 method)
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

Polarshine 45	
Ecology - soil	No information available.

1,2-Benzisothiazol-3(2H)-one (2634-33-5)	
Log Koc	≈ 0.97 (25 °C), (OECD 121 method)
Ecology - soil	Soluble in water.

White mineral oil (petroleum) (8042-47-5)	
Log Koc	3.58 – 14.7 (20 °C, pH: 7), (QSAR)

Aluminium oxide (1344-28-1)	
Ecology - soil	Insoluble in water.

Isopentyl acetate (123-92-2)	
Ecology - soil	Miscible with water.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.5. Results of PBT and vPvB assessment

Polarshine 45

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. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number

UN-No. (ADR) : Not regulated
UN-No. (IMDG) : Not regulated
UN-No. (IATA) : Not regulated

14.2. UN proper shipping name

Proper Shipping Name : Not regulated
Proper Shipping Name (IMDG) : Not regulated
Proper Shipping Name (IATA) : Not regulated

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : Not regulated
IMDG
Transport hazard class(es) (IMDG) : Not regulated
IATA
Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : Not classified

14.6. Special precautions for user

Special transport precautions : Not applicable

Overland transport

Not regulated

Transport by sea

Not regulated

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Air transport

Not regulated

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

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

Authorisations and/or restrictions on use (Annex XVII):		
Reference code	Applicable on	Entry title or description
3.	White mineral oil (petroleum) ; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics ; Ethyl acetate ; Terpeneol ; Isopentyl acetate	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008
3(a)	Ethyl acetate ; Isopentyl acetate	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 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	White mineral oil (petroleum) ; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics ; Ethyl acetate ; Terpeneol	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
40.	Ethyl acetate ; Isopentyl acetate	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : \approx 16.8 % (Directive 2010/75/EU)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
1	Identification of the substance/mixture and of the company/undertaking	Modified	
2	Hazards identification	Modified	

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

3	Composition/information on ingredients	Modified	
4	First aid measures	Modified	
5	Fire fighting measures	Modified	
6	Accidental release measures	Modified	
7	Handling and storage	Modified	
8	Exposure controls/personal protection	Modified	
9	Physical and chemical properties	Modified	
10	Stability and reactivity	Modified	
11	Toxicological information	Modified	
12.	Ecological information	Modified	
13	Disposal considerations	Modified	
15	Regulatory information	Modified	
16	Other information	Modified	

Abbreviations and acronyms:

	ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route)
	CAS (Chemical Abstracts Service) number
	BCF (Bioconcentration factor)
	CLP (Classification, Labeling and Packaging)
	DNEL (Derived No Effect Level)
	EC (European Community)
	EC50 (Effective Concentration 50%)
	EN (European Norm)
	IARC (International Agency for Research on Cancer)
	IATA (International Air Transport Association)
	IOELV (Indicative Occupational Exposure Limit)
	IMDG (International Maritime Dangerous Goods Code)
	IMO (International Maritime Organisation)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	NOEL (No Observed Effect Level)
	OECD (Organisation for Economic Co-operation and Development)
	OEL (Occupational exposure limit)
	PBT (Persistent, Bioaccumulative and Toxic)
	PNEC (Predicted No Effect Concentration)
	QSAR (Quantitative Structure-Activity Relationship)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	STEL (Short Term Exposure Limit)
	TWA (Time Weighted Average)

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	vPvB (very Persistent and very Bioaccumulative)

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

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

Not classified

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains 1,2-Benzisothiazol-3(2H)-one. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Polarshine 45

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS EU (REACH Annex II)

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.