

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

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Revision: 30.04.2017

Trade name: POLARIZED REFRIGERATION OIL ADDITIVE

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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Hazard pictograms



ÖPÙÉ

Signal word Y æ) ð *

Hazard statements

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Precautionary statements

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Hazard description:

WHMIS-symbols:

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NFPA ratings (scale 0 - 4)



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HMIS-ratings (scale 0 - 4)



P^ æ c@ MF
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HMIS Long Term Health Hazard Substances

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2.3 Other hazards

Results of PBT and vPvB assessment

PBT: P[ç] |æá|^É

vPvB: P[ç] |æá|^É

3 Composition/information on ingredients

3.2 Mixtures

Description: T áç|^ [-~ à~ç &^ |á á á^ [, , á@ [] @æ áá^ ~^ áááá }^É

Dangerous components:

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4 First aid measures

4.1 Description of first aid measures

General information:

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After inhalation:

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After skin contact:

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After eye contact:

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After swallowing:

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4.2 Most important symptoms and effects, both acute and delayed

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Hazards

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4.3 Indication of any immediate medical attention and special treatment needed

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5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

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For safety reasons unsuitable extinguishing agents:

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5.2 Special hazards arising from the substance or mixture

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5.3 Advice for firefighters

Protective equipment:

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6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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6.2 Environmental precautions:

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6.3 Methods and material for containment and cleaning up:

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Remove from the water surface (e.g. skim or suck off).

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid the formation of oil haze.

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Protect from humidity and water.

Avoid storage near extreme heat, ignition sources or open flame.

Unsuitable material for receptacle: aluminium.

· **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from foodstuffs.

Do not store together with acids.

· **Further information about storage conditions:**

Keep container tightly sealed.

Protect from humidity and water.

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs** No further relevant information available.

· **PNECs** No further relevant information available.

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Clean skin thoroughly immediately after handling the product.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use suitable respiratory protective device when aerosol or mist is formed.

Use suitable respiratory protective device in case of insufficient ventilation.

NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Neoprene gloves

Fluorocarbon rubber (Viton)

· **Not suitable are gloves made of the following materials:** Leather gloves

· **Eye protection:**



Safety glasses

· **Body protection:** Oil resistant protective clothing

· **Limitation and supervision of exposure into the environment**

No further relevant information available.

· **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Liquid

Colour:

Light yellow

· **Odour:**

Petroleum-like

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- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range:** Not Determined.
 - Boiling point/Boiling range:** >599°F/> 315 °C
- **Flash point:** >352°F/ > 178 °C
- **Flammability (solid, gaseous):** Not applicable.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not determined.
- **Density at 20 °C:** 0,89 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic at 20 °C:** 22 mm²/s
- **9.2 Other information** No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Keep away from heat and direct sunlight.
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alkali (lyes).
Reacts with strong oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

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- **10.4 Conditions to avoid** Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Halogenated hydrocarbons
Hydrogen chloride (HCl)

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
May cause acne.
Danger through skin adsorption.
- **Repeated dose toxicity:** May cause damage to organs through prolonged or repeated exposure.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Not easily biodegradable
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Harmful to fish
The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Product is recyclable as a waste oil. Deliver unused and/or contaminated product to waste oil collectors.
Contact waste processors for recycling information.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Solvent naphtha

14 Transport information

- **14.1 UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **14.2 UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **14.3 Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Not Regulated
- **14.4 Packing group**
- **DOT, ADR, IMDG, IATA** Not Regulated
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:
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None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
--

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic Categories

· EPA (Environmental Protection Agency)
--

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
--

None of the ingredients is listed.

· Canada

· Canadian Domestic Substances List (DSL)
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All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

· National regulations:

· Other regulations, limitations and prohibitive regulations

· Substances of very high concern (SVHC) according to REACH, Article 57
--

None of the ingredients is listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· Relevant phrases

- H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.
R36/37/38 Irritating to eyes, respiratory system and skin.
R38 Irritating to skin.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· Sources

- SDS Prepared by:
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