Verderlube is the lubricant/coolant used with the Verderflex range of peristaltic or hose pumps.

**Chemical Constitution**

1, 2, 3-Propanetriol \((\text{C}_3\text{H}_8\text{O}_3)\), 1,2-Propylene Glycol \(\text{C}_3\text{H}_6\text{CHOH-CH}_2\text{OH}\), indigo blue E132

**Form:** liquid

**Colour:** blue

**Odour:** odourless

**Food grade**

**Physical and Safety Data**

- **Solidification point** \((-40\text{°C} / -40\text{°F})\) approx.
- **Density** \((20\text{°C} / 68\text{°F})\) 1245 kg/m\(^3\) approx.
- **Vapour pressure** \((20\text{°C} / 68\text{°F})\) \(<0.01\text{ mbar}\) approx.
  \((100\text{°C} / 210\text{°F})\) \(<1\text{ mbar}\)
- **Viscosity** \((20\text{°C} / 68\text{°F})\) 700 mPas approx.
- **Solubility in water** \((20\text{°C})\) miscible
- **pH value** 7 approx.
- **Flash point** 177°C / 350°F approx. (COC: ISO 2592)
- **Auto ignition temperature** \(400\text{°C} / 750\text{°F}\) approx.
- **Explosion limits** not established
- **Thermal decomposition** -
- **Hazardous decomposition products** -
- **Hazardous reactions** -
- **Incompatible substances** -

**Transport**

Not classified as dangerous for transport (RID/ADR-ADNE-IATA-IMDG)

**Regulations**

On the basis of the data directly available, lubricant/coolant is not a dangerous substance within the meaning of Council Directive 79/831/EEC (classification, packaging and labeling of dangerous substances). One should however observe the usual precautionary measures for handling.

**Protective Measures, Storage and Handling**

- **Technical Protective Measures:** The lubricant/coolant is hygroscopic; keep the container tightly closed
- **Personal Protective Equipment:** Normal precautions should be observed for handling all chemicals
- **Industrial Hygiene:** Good industrial hygiene should be followed
- **Protection against Fire and Explosion:** Normal protective measures as for organic chemical products with flash points of above 100°C
- **Disposal:** Special deposit (product is miscible with water)

**Measures in case of Fires and Accidents**

- **After Spillage / Leakage / Gas Leakage:** Soak up with absorbent material (sand, peat, etc.) or contain and shovel into drums or containers. Remove residue by spraying with water
Extinguishing Media
Carbon dioxide, water (mist), halones, dry powder, alcohol resistant foam

First Aid
Normal safety precautions; if the product is thought to have caused personal injury, immediate medical advice and assistance should be sought

Further Information
During burning, poisonous acrolein may be found

Information on Toxicity
LD50 oral (rat) 12600 mg/kg (not harmful) *
Skin irritation (rabbit) low irritant **
Eye irritation (rabbit) low irritant **

** = Sax: Dangerous Properties of Industrial Materials (1984)

Information on Ecological Effects
Completely biodegradable
Water pollution reactors $gO_2/g$  BOD$_2$: 0.87 (NEN 3235-5.4)
BOD$_1$: 1.16 (NEN 3235-5.3)
Fish: goldfish LC50 (24h): >5000 mg/1 (modified ASTM D1345)
The aquatic toxicity (TLm96) is >1000mg/1, which is defined by NIOSH as an insignificant hazard

Further Information
Employees of VERDER have not experienced any harmful effect during normal handling and production

The information contained in this sheet is based on our knowledge of the product at its delivery date.

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