SAFETY DATA SHEET

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Lubicating oil VG 68

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

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

Are of use: Circulating/gear oil

1.3 Details of the supplier of the safety data sheet

Supplier:

ALFA LAVAL Tumba AB

Hans Stahles väg
SE-147 80 Tumba
Sweden
Tel: +46 8 53 06 50 00
Fax: + 46 8 53 06 52 59

e-mail: sds.question@alfalaval.com

1.4 Emergency telephone number: Dial 112 in case of emergency poisoning and ask for Poison Information both day and night. Dial + 46 (0) 8-331231 if you have other questions concerning acute poisonings mon-fri 9.00-17.00

2. Hazards identification

2.1 Classification of the substance or mixture

This product is not classified as hazardous according to current regulations.

2.2 Label elements

This product is not labelled.

2.3 Other hazards

Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage..

3. Composition/information on ingredients

3.2 Mixtures

Declaration of the consituents according to CLP 1272/2008/EC and 1999/45/EC

Substances	Registration No.	Weight - (%)	CAS No.	EC No	Classification
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	01-2119486452-34	40-50%	68037-01-4	-	Asp. Tox. 1 H304

TRIPHENYL PHOSPHATE	-	0,1-1%	115-86-6	204-112-2	Aquatic Acute 1 H400 (M factor 1), Aquatic Chronic 1 H410 (M factor 1)

See section 16 for explanation to R-phrases and/or Hazard statements

4. First aid measures

4.1 Description of first aid measures
General recommendations

First aid – eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
First aid- skin contact	Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.
First aid- ingestion	First aid is normally not required. Seek medical attention if discomfort occurs.
First aid- inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
4.2 Most important symptoms and effects, both acute and delayed	**Inhalation:** Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. **Ingestion:** No information **Skin contact:** no information. **Eye contact:** Potential risk of transient stinging or redness if accidental eye contact occurs.
4.3 Indication of any immediate medical attention and special treatment needed	Treatment should in general be symptomatic and directed to relieving any effects. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue

planes.

5. Firefighting measures

5.1 Extinguishing media
a) Suitable extinguishing media

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

b) Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulphur oxides, Incomplete combustion products, Oxides of carbon

5.3 Advice for firefighters

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

FLAMMABILITY PROPERTIES
Flash Point [Method]: >210°C (410°F) [ASTM D-92]
Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.9 [Estimated]
Autoignition Temperature: No data available

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

NOTIFICATION PROCEDURES
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES
Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders

6.2 Environmental precautions

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas

6.3 Methods and material for containment and cleaning up

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

6.4 Reference to other sections

Personal protection, see section 8.
Disposal, see section 13.

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7. Handling and storage

7.1 Precautions for safe handling

Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).
Static Accumulator: This material is a static accumulator.

7.2 Conditions for safe storage, including any incompatibilities

The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabeled containers

7.3 Specific end use

See section 1

8. Exposure controls/personal protection

8.1 Control parameters

National occupational exposure limit values that correspond to Community occupational exposure limit values in accordance with Directive 98/24/EC, including any notations as referred to in Article 2(1) of Commission Decision 95/320/EC

Substance	CAS No	*Limit value – Short term*		*Limit value - 8 h*		Notifications
		ppm	*mg/m³*	*ppm*	*mg/m³*	
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	68037-01-4				5 mg/m3	Aerosols (thoracic fraction) (Information from supplier.)
TRIPHENYL PHOSPHATE	115-86-6		6 mg/m3		3 mg/m3	UK EH40

Reference: UK EH40 Workplace Exposure Limits. Exposure limits for use with Control of Substances Hazardous to Health Regulations 2002 (as amended)

Derived No Effect Level: No DELs available
Predicted No Effect Concentration: No PNECs available

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8.2 Exposure controls	
Appropriate engineering controls	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Hand protection	No protection is ordinarily required under normal conditions of use. If contact is prolonged or repeated oil resistant cloves should be worn.
Respiratory protection	No special requirements under ordinary conditions of use and with adequate ventilation. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.
Other protection	No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
Environmental exposure controls	Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Orange liquid
Odour	Characteristic
Odour threshold	No information.
pH (X ºC)	Not applicable
Melting point/freezing point	Puor point: -45℃ (-49℉) [ASTM D5950]
Initial boiling point and boiling range	> 260℃ (500℉) [Estimated]
Flash point	>210℃ (410℉) [ASTM D-92]
Evaporation rate	No information.
Flammability (solid, gas)	No information.
Upper/lower flammability or explosive limits	**Flammable Limits (Approximate volume % in air):** UEL: 7.0 LEL: 0.9 [Estimated]
Vapour pressure	< 0.013 kPa (0.1 mm Hg) at 20 ℃ [Estimated]
Vapour density	> 2 at 101 kPa [Estimated]
Relative Density (at 15 ℃)	0.848 [ASTM D4052]
Solubility(ies)	**water** Negligible
Partition coefficient: n-octanol/water	> 3.5 [Estimated]
Auto-ignition temperature	No information.
Decomposition temperature	No information.
Viscosity	68 cSt (68 mm2/sec) at 40ºC | 11.57 cSt (11.57 mm2/sec) at 100℃ [ASTM D 445]
Explosive properties	None
Oxidising properties	None
9.2 Other information	No additional information

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10. Stability and reactivity

10.1 Reactivity	Reacts with oxidizing agents.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous polymerisation will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	No specific data.
10.5 Incompatible materials	Oxidizing agents.
10.6 Hazardous decomposition products	Material does not decompose at ambient temperatures.

11. Toxicological information

11.1 Information on toxicological effects

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

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OTHER INFORMATION

Contains:
Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitising in test animals and humans.

12. Ecological information

12.1 Toxicity	Material -- Not expected to be harmful to aquatic organisms. Material -- Not expected to demonstrate chronic toxicity to aquatic organisms
12.2 Persistence and degradability	Not determined.
12.3 Bio accumulative potential	No information.
12.4 Mobility in soil	Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.
12.5 Results of PBT and vPvB assessment	This product is not, or does not contain, a substance that is a PBT or a vPvB.
12.6 Other adverse effects	No known significant effects or critical hazards.

ECOLOGICAL DATA

Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LL50 1003 mg/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOELR 1 mg/l: data for similar materials

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13. Disposal considerations

13.1 Waste treatment methods

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants.

EWC code:

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Recommended EWC code:
13 02 06*

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14. Transport information

	ADR/RID-S	IMDG	IATA
14.1 UN number	Not classified as dangerous goods.	Not classified as dangerous goods.	Not classified as dangerous goods.
14.2 UN proper shipping name	Not relevant.	Not relevant.	Not relevant.
14.3 Transport hazard class(es)	Not relevant.	Not relevant.	Not relevant.
14.4 Packing group	Not relevant.	Not relevant.	Not relevant.
14.5 Environmental hazards	Not relevant.	Not relevant.	Not relevant.
14.6 Special precautions for user	Not relevant.	Not relevant.	Not relevant.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant.	Not relevant.	Not relevant.

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15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	Gestis, International Limit Values European Waste Catalouge and Hazardous Waste List. **CLP 1272/2008/EC** **EU Regulation (EC) No. 1907/2006 (REACH)** **Annex XIV - List of substances subject to authorisation** **Substances of very high concern** None of the components are listed **Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles -** Not applicable **Complies with the following national/regional chemical inventory requirements:** AICS, DSL, IECSC, KECI, PICCS, TSCA
15.2 Chemical safety assessment	Not performed for this product.

16. Other information

Hazard statements/Risk phrases	Asp. Tox. 1 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1 Aquatic Acute 1 H400: Very toxic to aquatic life; Acute Env Tox, Cat 1 Aquatic Chronic 1 H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1
Important changes have been made in section	-

LIMITATION OF LIABILITY

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. **Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.**