SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: VAKE Antifreeze
Product Code: VAKEanti04, Vakeanti20, Vakeanti200
Synonyms: Anti Freeze, Heat Transfer Liquid

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

Use of substance / mixture Antifreeze liquid

1.3. Details of the supplier of the safety data sheet

Company name **SUNBEAMsystem AB**
Finnbergsvägen 62
13131 Nacka
Sweden
Tel: +46 770 221 220
Email: info@SUNBEAMsystem.se

1.4. Emergency telephone number

Tel: +46 770 221 220
(office hours only)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification under CLP:
This product has no classification under CLP.

2.2. Label elements

Label elements:
This product has no label elements.

2.3. Other hazards

PBT:
This product is NOT identified as a PBT/vPvB substance.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Chemical identity: Refined plant based oil.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact: Bathe the eye with running water.
Ingestion: Wash out mouth with water. If large quantities are ingested, consult a doctor.

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

Eye contact: There may be irritation and redness.
Ingestion: May be harmful if swallowed in large quantities.

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

Immediate/special treatment: Show this safety data sheet to the doctor in attendance.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Water spray. Carbon dioxide. Alcohol resistant foam. Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Incomplete incineration can create carbon oxides.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:
Danger for slipping. Clean up product immediately. Use footwear with sufficient grip.

6.2. Environmental precautions

Environmental precautions:
Follow local laws regarding discharging.

6.3. Methods and material for containment and cleaning up

Clean-up procedures:
Soak up with inert absorbent material and dispose at waste collection point.

6.4. Reference to other sections

Reference to other sections: For waste disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling requirements:
For precautions see section 4.1.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

7.3. Specific end use(s)

Specific use(s):
No other specific uses stipulated other than the uses mentioned in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Workplace exposure limits Resiprable dust
State 8 hour TWA 15 min STEL | 8 hour TWA 15min STEL
Sweden 10mg/m3

DNEL / PNEC: No data available

8.2. Exposure controls

Engineering measures	Handle in accordance with good industrial hygiene and safety practice.
Respiratory protection	If treating liquids above 80°C and professional risk assessment shows air-purifying respirators are appropriate, e.g. due to the possible presence of other elements use a full-face respirator and protection.
Hand protection	If handling hot liquids, or liquids that might contain residue from different products previously used in the system, use protective gloves.
Eye protection	Safety glasses.

Skin protection	If treating hot liquids that might cause burns, or treating liquids that might contain residues from other products, use protective clothing.
Environmental	Follow local laws regarding discharging non-toxic liquids other than rainwater.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

State	Liquid
Color	Colorless
Odor	Odorless
Solubility in water	Soluble
Boiling point in Celsius	179
Melting point	19
Flammability limits & lower	0.9
Flash point in Celsius	180
Vapor pressure	0.0033 hPa at 50°C
Relative density	1.25 g/ml
pH	5.5-8

9.2. Other information

Other information: Surface tension - 63.4 mN/m at 20C Relative vapor density - 3.18 (Air = 1.0)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Hazardous reactions: No data available.

10.4. Conditions to avoid

Conditions to avoid: No data available.

10.5. Incompatible materials

Materials to avoid: Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: Other decomposition products - no data available. In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
Dermal	RAT	LD50	>10	kg/kg
Oral	RAT	LD50	12.6	kg/kg

11.2. Symptoms / routes of exposure

Eye contact: There may be irritation and redness.
Ingestion: May be harmful if swallowed in large quantities.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity (aquatic and terrestrial, where available)
Ecology - General: No supplementary information available.
Ecology - Air: TA-Luft Klasse 5.2.5.
Ecology - Water:
Mild water pollutant (surface water)
NOT harmful to fishes (LC50 (96h) >1,000 mg/l)
NOT harmful to aquatic organisms (EC50 >1,000 mg/l)
NOT harmful to algae
NOT harmful to bacteria
Bioaccumulation: not applicable
Sludge digestion is inhibited at >1,000 mg/l 50%
Readily biodegradable in water (OECD 301D: 82%; 20 days)

While degrading in water, oxygen is consumed. Concentration limits apply:

Organism/Biotic Test	Concentration limits
LC50 fishes 1	54,000 mg/l (96 h, SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
LC50 other aquatic organisms 1	> 1,000 mg/l (96 h)
LC50 other aquatic organisms 1	> 1,000 mg/l (BACTERIA, ACTIVATED SLUDGE)
LC50 fish 2	> 1,000 mg/l (96 h, PISCES)
EC50 Daphnia 2	> 10,000 mg/l (24 h, DAPHNIA MAGNA, LOCOMOTOR EFFECT)
TLM fish 1	> 1,000 ppm (96 h, PISCES)
TLM other aquatic organisms 1	> 1,000 ppm (96 h)
Threshold limit other aquatic organisms	2,900 mg/l (192 h, MICROCYSTIS AERUGINOSA, TOXICITY TEST)

Threshold limit other aquatic organisms 2	> 10,000 mg/l (16 h, PSEUDOMONAS PUTIDA, TOXICITY TEST)
Threshold limit algae 1	> 10,000 mg/l (168 h, SCENEDESMUS QUADRICAUDA, TOXICITY TEST)

12.2. Persistence and degradability

Readily biodegradable, OECD 301
Biochemical oxygen demand (BOD): 0.87 g O2/g substance
Chemical oxygen demand (COD): 1.16 g O2/g substance (ISO 15705)
ThOD: 1.217 g O2/g substance
BOD: (% of ThOD) 71 % ThOD

12.3. Bioaccumulative potential

Log P octanol /water = -1.76/2.6

12.4. Mobility in soil

Surface tension 0,063 N/m (20°C) Ecology - biodegradability in soil: no data available

12.5. Results of PBT and vPvB assessment

PBT identification
This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects
None available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal operations
Follow local laws regarding discharging non-toxic liquids other than rainwater.
Disposal of packaging
Sort and dispose of as recyclable plastic container.

SECTION 14: TRANSPORT INFORMATION

Transport class: This product does not require a classification for transport.
Not hazardous according to RID/ADR, GGVS/GGVE, ADNR, IMDG, ICAO-TI/IATA-DGR

SECTION 15: REGULATORY INFORMATION

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

Specific regulations: This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
No REACH Annex XVII restrictions

15.2. Chemical Safety Assessment

Chemical safety assessment: For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.
* indicates text in the SDS which has changed since the last revision.
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and shall be used only as a guide. This company shall not be held liable for any
damage resulting from handling or from contact with the above product.