

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance/preparation

1.1.1 Product Name

NESTE JÄÄHDYTINNESTE

1.1.2 Product code

770100, LB 4850 (200L), LB 9585 (3L)

1.2 Use of the Substance/Preparation

1.2.1 Expressed in writing

Coolant

1.3 Company/Undertaking Identification

1.3.1 Supplier

Neste Markkinointi Oy

1.3.2 Contact information:

Street address

Keilaranta 8

Postcode and post office

Espoo

FINLAND

P.O.Box

P.O.B. 95

Postcode and post office

FIN-00095 NESTE OIL, FINLAND

FINLAND

Telephone

+358- 10 45811

Telefax

+358- 10 45 84442

Email

lubetec@nesteoil.com

1.4 Emergency telephone number

1.4.1 Telephone number, name and address

+358-9-471 977, +358-9-4711, Poison Information Centre/HUS

P.O.B 340 (Haartmaninkatu 4) 00029 HUS (Helsinki, Finland)

2. HAZARDS IDENTIFICATION

FIRE AND EXPLOSION HAZARD: The product is not classified as dangerous.

HEALTH HAZARD:Harmful if swallowed.

ENVIRONMENTAL HAZARD: The product is not classified as dangerous. Risk of soil and ground water contamination.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Hazardous components

3.1.1

CAS number

107-21-1

19766-89-3

3.1.2

Chemical name of the substance

Ethylene glycol

Aliphatic acid, sodium salt

3.1.3

Concentration

> 94 %

< 3 %

3.1.4

Warning symbol, R phrases and other information

Xn; R22

Xn; R63

4. FIRST AID MEASURES

4.1 Additional advice

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4.2 Inhalation

If vapour is inhaled, remove the person to fresh air. Consult a physician when needed.

4.3 Skin contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

4.4 Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

4.5 Ingestion

Call a physician immediately. Rinse mouth.

4.6 Information to doctor or other trained persons giving first aid

Symptoms of poisoning may only appear several hours later. Keep under medical supervision for at least 48 hours.

5. FIRE-FIGHTING MEASURES**5.1 Suitable extinguishing media**

Water spray, foam, dry powder, carbon dioxide.

5.2 Extinguishing media which must not be used for safety reasons

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5.3 Special exposure hazards in a fire

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5.4 Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions**

Use personal protective equipment.

6.2 Environmental precautions

Try to restrict the release and prevent spread of the product into the environment. Small amounts can be diluted well with water and flushed into sewer.

6.3 Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Splashes can be flushed with water.

6.4 Further information

In case of spill, immediately contact local authorities.

7. HANDLING AND STORAGE**7.1 Handling**

Containers must be handled carefully. Avoid inhalation of vapour and contact with skin. Avoid contact with eyes. Do not re-use empty containers before careful cleaning and repairing. Do not burn, or use a cutting torch on, the empty drum.

7.2 Storage

Keep tightly closed. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Product is hygroscopic.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Exposure Limit Values****8.1.1 Threshold limits**

1,2-Ethanediol, ethylene glycol 20 ppm (8 h)

40 ppm (15 min)

50 mg/m³ (8 h)
skin, HTP-2007/FIN

100 mg/m³ (15 min)

8.1.2 Other information on limit values

The occupational exposure monitoring method: in air NIOSH Method 5523.

8.2 Exposure controls

8.2.1 Occupational exposure controls

Wash the hands before breaks and after work. Use personal protective equipment and/or local ventilation when needed.

8.2.1.1 Respiratory protection

Breathing apparatus needed only when aerosol or mist is formed. Respirator with filter A, particle filter, type P2.

8.2.1.2 Hand protection

Protective gloves (e.g. of neoprene, PVC or Viton). Change protective gloves regularly. Penetration time > 480 min; Class 6.

8.2.1.3 Eye protection

Safety goggles if there is a risk of splashing.

8.2.1.4 Skin and body protection

Protective clothing when needed.

8.2.2 Environmental exposure controls

Any possible leakage is considered by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General Information (appearance, odour)

Green liquid.

9.2 Important Health Safety and Environmental Information

9.2.1	pH	7
9.2.2	Boiling point/range	174 °C
9.2.3	Flash point	128 °C (Pensky-Martens)
9.2.5	Explosive properties	
9.2.5.1	Lower explosion limit	3,2 vol-%(ethylene glycol)
9.2.5.2	Upper explosion limit	15,3 vol-%(ethylene glycol)
9.2.7	Vapour pressure	0,1 hPa (20 °C) (ethylene glycol)
9.2.8	Relative density	1,1
9.2.9	Solubility	
9.2.9.1	Water solubility	Completely soluble.
9.2.9.2	Fat solubility (solvent - oil to be specified)	Oil: Insoluble.
9.2.10	Partition coefficient (n-octanol/water)	Ethylene glycol: log Kow = -1,9
9.2.12	Vapour density	2,1

9.3 Further information

Auto-ignition temperature : 400 °C (ethylene glycol)

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

Vapour/air-mixtures are explosive at intense warming. Avoid strong oxidizing conditions.

10.2 Materials to avoid

Strong acids and oxidising agents.

10.3 Hazardous decomposition products

Smoke and irritating vapours.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

Harmful if swallowed.

Ethylene glycol:

LD50/oral/rat = 4700 mg/kg, Ethylene glycol

LD50/dermal/rabbit = 9530 mg/kg, Ethylene glycol

11.2 Irritation and corrosion

See also section 11.5. Harmful by inhalation, in contact with skin and if swallowed. The product causes irritation of eyes, skin and mucous membranes.

11.3 Sensitisation

No data.

11.5 Human experience

May cause irritation of respiratory tract. May cause eye/skin irritation. Product can be absorbed through the skin.

Ethylene glycol: Ingestion: Central nervous system damages. Kidney injury may occur. Fatal dose/human (80 kg) = 1,1 dl (estimate) LDLO = 786 mg/kg (oral, human).

11.6 Further information

Reproductive toxicity: Prolonged over-exposure can also lead to harmful effects in fertility and foetal development.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

12.1.1 Aquatic toxicity

IC50 = 9500 - 13000 mg/l, alga (*Selenastrum capricornutum*)

EC50 = 46300 - 51000 mg/l, daphnid (*Daphnia magna*)

LC50 = 18000 - 46000 mg/l, rainbow trout (*Oncorhynchus mykiss*)

12.2 Mobility

Soluble in water.

12.3 Persistence and degradability

12.3.1 Biological degradability

Biochemical oxygen demand within 20 days (BOD20) = 88 % (Closed Bottle Test); Readily degradable.

12.4 Bioaccumulative potential

Not accumulative (estimate).

Ethylene glycol: log Kow = -1,9; Not accumulative.

12.6 Other adverse effects

Risk of soil and ground water contamination.

13. DISPOSAL CONSIDERATIONS

Product waste should be treated according to national regulations and local authorities' advice. When handling the waste note the hazards and take care of necessary safety measures, labelling and information. Do not re-use empty containers before careful cleaning and repairing. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

14.3 Land transport

14.3.1 ADR/RID

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14.3.4 Further Information

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

14.4 Sea transport

14.4.1 IMDG

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14.5 Air transport

14.5.1 ICAO/IATA

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15. REGULATORY INFORMATION

15.1 Information on the warning label

15.1.1 Letter code of the warning symbol and indications of danger for the preparation

Xn Harmful

15.1.2 Names of the ingredients given on the warning label

Ethylene glycol

15.1.3 R-phrases

R22 Harmful if swallowed.

15.1.4 S-phrases

S2 Keep out of reach of children.

S24/25 Avoid contact with skin and eyes.

S46 If swallowed, seek medical advice immediately and show this container or label.

15.1.5 Special regulations on certain preparations

ADDITIONAL LABELLING OF RETAIL PACKAGES: Keep out of the reach of children.

16. OTHER INFORMATION

16.1 Full text of R-phrases referred to under sections 2 and 3

R22 Harmful if swallowed.

R63 Possible risk of harm to the unborn child.

16.2 Training advice

Ethylene glycol: Exposure to substance in work is considered to cause danger to heredity, fetus or reproduction according to Ministry of Labour decision 1044/91, (Finland).

Female workers are recommended to contact occupational health care immediately at the beginning or before planning of pregnancy.

16.4 Further Information

Neste Markkinointi Oy/Lubrication, product information, tel. +358 (0)10 45 85410, e-mail: lubetec@nesteoil.com

16.5 Literary reference

Regulations, databases, literature, own researches.

16.6 Additions, Deletions, Revisions

1, 2, 3, 8, 14, 15, 16