SAFETY DATA SHEET
NESTE MULTIHYDRAULI 22

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name NESTE MULTIHYDRAULI 22

Product number ID 16201

Internal identification 3224

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

Identified uses Hydraulic oil.

1.3. Details of the supplier of the safety data sheet

Supplier

Neste Markkinointi Oy
Keilaranta 21, Espoo, P.O.B. 95, 00095 NESTE OIL, FINLAND
Tel. +358 10 45811
Fax +358 10 45 84442
lubetec@nesteoil.com

1.4. Emergency telephone number

National emergency telephone number +358-9-471 977, +358-9-4711, Poison Information Centre/HUS, P.O.B 340 (Tukholmankatu 17) 00029 HUS (Helsinki, Finland)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements EUH208 Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.

Supplemental label information EUH210 Safety data sheet available on request.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Distillates (petroleum), hydrotreated light naphthenic **80 - < 90 %**

CAS number: 64742-53-6 EC number: 265-156-6 REACH registration number: 01-2119480375-34-XXXX

Classification
Asp. Tox. 1 - H304

Distillates (petroleum), solvent-dewaxed heavy paraffinic **2,5 - < 5 %**

CAS number: 64742-65-0 EC number: 265-169-7 REACH registration number: 01-2119471299-27-XXXX

Classification
Asp. Tox. 1 - H304

Olefin sulfide **2,5 - < 5 %**

CAS number: —

Classification
Skin Irrit. 2 - H315

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) **1 - < 2,5%**

CAS number: — EC number: 931-384-6 REACH registration number: 01-2119493620-38-XXXX

Classification
Acute Tox. 4 - H302
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Aquatic Chronic 2 - H411

Oleylamine **0,25 - < 0,5 %**

CAS number: 112-90-3 EC number: 204-015-5

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Acute Tox. 4 - H302
Skin Corr. 1B - H314
STOT SE 3 - H335
STOT RE 2 - H373
Asp. Tox. 1 - H304
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

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Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs	**0,1 - < 0,25 %**
CAS number: —	REACH registration number: 01-2119971727-23-XXXX
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1B - H317 Aquatic Chronic 3 - H412	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.

Ingestion Rinse mouth. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms are severe or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

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

General information The product contains a small amount of sensitising substance. May cause an allergic skin reaction. May irritate eyes.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Hazardous combustion products Carbon dioxide (CO2). Carbon monoxide (CO). Hydrocarbons. Mercaptans. Aldehydes. Sulphurous gases (SOx). Hydrogen sulphide (H2S). Nitrous gases (NOx). Oxides of phosphorus.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Contain and collect extinguishing water. Avoid discharge into drains.

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Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective clothing as protection against splashing or contamination.
For emergency responders	Keep unnecessary and unprotected personnel away from the spillage.

6.2. Environmental precautions

Environmental precautions	Stop leak if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with sand or other inert absorbent. Place waste in labelled, sealed containers. Dispose of waste via a licensed waste disposal contractor.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid inhalation of vapours and spray/mists. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. All handling should only take place in well-ventilated areas. Take precautionary measures against static discharges. For personal protection, see Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep containers upright. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Specific end use(s)	Not known.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls	All handling should only take place in well-ventilated areas. Provide eyewash station and safety shower.
Eye/face protection	Tight-fitting safety glasses.
Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material: Nitrile rubber. Butyl rubber.
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination.
Respiratory protection	No specific recommendations.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

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9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Tan.
Odour	Petroleum.
Odour threshold	-
pH	-
Melting point	-
Initial boiling point and range	> 350°C
Flash point	160°C
Flammability (solid, gas)	-
Upper/lower flammability or explosive limits	-
Vapour pressure	< 0,01 hPa
Vapour density	-
Relative density	0,901 @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	-
Auto-ignition temperature	-
Decomposition Temperature	-
Viscosity	22 mm2/s @ 40°C
Explosive properties	-
Oxidising properties	-

9.2. Other information

Other information Not known.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Oxidising agents.

10.6. Hazardous decomposition products

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Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Hydrogen sulphide (H2S). Nitrous gases (NOx). Sulphurous gases (SOx). Mercaptans.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation May irritate eyes. Based on available data the classification criteria are not met. Supplier's information. Bridging principle (Dilution).

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation The product contains a small amount of sensitising substance. Based on available data the classification criteria are not met. Supplier's information. Bridging principle (Dilution).

Germ cell mutagenicity

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Toxicological information on ingredients.

Distillates (petroleum), hydrotreated light naphthenic

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 5000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} > 2000 mg/kg, Dermal, Rabbit

Distillates (petroleum), solvent-dewaxed heavy paraffinic

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 5000 mg/kg, Oral, Rat

Acute toxicity - dermal

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Notes (dermal LD_{50}) LD_{50} > 5000 mg/kg, Dermal, Rabbit

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} ~2000 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Oleylamine

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} 1950 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity The product is not expected to be hazardous to the environment. Based on available data the classification criteria are not met. Supplier's information. Bridging principle (Dilution).

Ecological information on ingredients.

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

Acute toxicity - fish
LL_{50}
~24 mg/l, 48 h, WAF
Onchorhynchus mykiss (Rainbow trout)
OECD TG 203

Acute toxicity - aquatic invertebrates
EL50 ~91,4 mg/l, 48 h, WAF
Daphnia magna
OECD TG 202

Acute toxicity - aquatic plants
ErC50 15 mg/l, 96 h
Pseudokirchneriella subcapitata
OECD TG 201
NOEC 3,3 mg/l, 96 h
Pseudokirchneriella subcapitata
OECD TG 201

Chronic toxicity - aquatic invertebrates
NOEC
0,12 mg/l, 21 d
Daphnia magna
WAF
OECD TG 211

Oleylamine

Acute aquatic toxicity

LE(C)$_{50}$ 0.1 < L(E)C50 ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC_{50}, 96 hours: 0,11 mg/l, Pimephales promelas (Fat-head Minnow)

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Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0,011 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 0,083 mg/l, Desmodesmus subspicatus NOEC, 96 hours: 0,01 mg/l, Pseudokirchneriella subcapitata
Chronic aquatic toxicity	
M factor (Chronic)	1

12.2. Persistence and degradability

Persistence and degradability No data available.

Biodegradation No data available.

Ecological information on ingredients.

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

Biodegradation 7,4 %, 28 d

Oleylamine

Biodegradation 44 %, 28 d

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient -

Ecological information on ingredients.

Oleylamine

Bioaccumulative potential (BCF) > 500

Partition coefficient log Pow: (Estimated), > 4

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Do not reuse empty containers.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

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14.1. UN number

-

UN No. (ADR/RID) -

14.2. UN proper shipping name

Proper shipping name (ADR/RID) -

14.3. Transport hazard class(es)

ADR/RID class -

14.4. Packing group

ADR/RID packing group -

14.5. Environmental hazards

Environmentally hazardous substance/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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No data available.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet WAF = Water Accommodated Fraction

Key literature references and sources for data The manufacturer's SDS. 12.6.2015

Revision comments This is first issue. (new SDS software has been introduced)

Revision date 01/02/2016

Supersedes date 01/08/2011

SDS number 5582

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Hazard statements in full

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.