SAFETY DATA SHEET
NESTE HYDRAULIC 28 ARCTIC

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

1.1. Product identifier

Product name NESTE HYDRAULIC 28 ARCTIC

Product number ID 18899

Internal identification 2616

Synonyms; trade names Previous product name: NESTE HYDRAULI 28 ARCTIC, product number 3249, ID 16125.

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, FIN-00095 NESTE, FINLAND
Tel. +358 10 45811
lubetec@neste.com

1.4. Emergency telephone number

National emergency telephone number +358-9-471 977, +358-9-4711, Poison Information Centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard statements EUH208 Contains Reaction Mass of Dodecane-1-Thiol and Tridodecyl Trithiophosphite. May produce an allergic reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P273 Avoid release to the environment.
P501 Dispose of contents/ container in accordance with national regulations.
P102 Keep out of reach of children.

Supplemental label information EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Other hazards This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Distillates (petroleum), hydrotreated light naphthenic **70 - < 80 %**

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 **5 - < 10 %**

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

Classification
Asp. Tox. 1 - H304

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) **1 - < 2,5 %**

CAS number: 4259-15-8 EC number: 224-235-5 REACH registration number: 01-2119493635-27-XXXX

Classification
Eye Dam. 1 - H318
Aquatic Chronic 2 - H411

Reaction Mass of Dodecane-1-Thiol and Tridodecyl Trithiophosphite **0,1 - < 0,5 %**

CAS number: — EC number: 947-268-3

Classification
Skin Sens. 1 - H317

Reaction Products of Fatty Acids, C16-18, C18 Unsaturated, with Amines, Polyethylenepoly-, Triethylenetetramine Fraction and 3-(C9-C15,C12 rich, Alk-1-enyl) Dihydro-2,5-Furandione **0,1 - < 0,25 %**

CAS number: — EC number: 947-263-6

Classification
Skin Irrit. 2 - H315
Repr. 2 - H361d
Aquatic Chronic 4 - H413

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2,6-di-tert-butylphenol		**0,1 - < 0,25 %**
CAS number: 128-39-2	EC number: 204-884-0	REACH registration number: 01-2119490822-33-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	

Classification
Skin Irrit. 2 - H315
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

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

General information Keep affected person under observation. Show this Safety Data Sheet to the medical personnel. Get medical advice/attention if you feel unwell. Remove affected person from source of contamination.

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. Get medical attention if symptoms are severe or persist.

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. Repeated exposure may cause skin dryness or cracking.

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 This product sustains combustion. 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).

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. Use only in well-ventilated areas.

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. Avoid exposure - obtain special instructions before use. Empty containers or liners may retain some product residues and hence be potentially hazardous. Persons susceptible to allergic reactions should not handle this product. 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.

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Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Tan.
Odour	Petroleum.
Odour threshold	-
pH	-
Melting point	< -45°C Pour point
Initial boiling point and range	-
Flash point	104°C
Flammability (solid, gas)	-
Upper/lower flammability or explosive limits	-
Vapour pressure	-
Vapour density	-
Relative density	~ 0,888 @ 15°C
Solubility(ies)	Insoluble in water.
Partition coefficient	-
Auto-ignition temperature	-
Decomposition Temperature	-
Viscosity	Kinematic viscosity ~ 28 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	None known.

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10.5. Incompatible materials

Materials to avoid Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products No known hazardous decomposition products.

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 Repeated exposure may cause skin dryness or cracking. Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

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. May cause an allergic skin reaction. Based on available data the classification criteria are not met.

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

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Acute toxicity - oral

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

Acute toxicity - dermal

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

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} 3100 mg/kg, Oral, Rat (OECD 401)

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} > 5000 mg/kg, Dermal, Rabbit (OECD 402)

2,6-di-tert-butylphenol

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 5000 mg/kg, Oral, Rat (OECD TG 401)

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects. The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 4,4 mg/l, Oncorhynchus mykiss (Rainbow trout)
WAF (OECD TG 203)

Acute toxicity - aquatic invertebrates EL50, 48 hours: 75 mg/l, Daphnia magna
WAF (OECD TG 202)

Acute toxicity - aquatic plants EL50, 72 hours: 410 mg/l, Desmodesmus subspicatus
WAF

2,6-di-tert-butylphenol

Acute aquatic toxicity

$LE(C)_{50}$ 0.1 < L(E)C50 ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC_{50}, 96 hours: 13 mg/l, Brachydanio rerio (Zebra Fish)
LC_{50}, 96 hours: > 0,1 mg/l, Oncorhynchus mykiss (Rainbow trout)
(OECD TG 203)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 0,45 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: 3,6 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

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M factor (Chronic)	1
Chronic toxicity - fish early life stage	NOEC, 14 days: 0,30 mg/l, Pimephales promelas (Fat-head Minnow)

12.2. Persistence and degradability

Persistence and degradability No data available.

Biodegradation No data available.

Ecological information on ingredients.

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

Biodegradation	< 5 %, 27 d (OECD TG 310D)

2,6-di-tert-butylphenol

Biodegradation	12 - 24 %, 28 d (OECD TG 302C)

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient -

Ecological information on ingredients.

2,6-di-tert-butylphenol

Bioaccumulative potential	Chlorella fusca vacuolata 0,05 mg/l, 24 h BCF 800 Leuciscus idus melanotus 0,037 mg/l, 3 d BCF 660
Partition coefficient	log Pow 4,92

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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. Do not discharge into drains or watercourses or onto the ground. 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 MARPOL 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).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
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. 4.12.2019

Revision comments Revised formulation. Revised classification. NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 09/12/2019

Supersedes date 17/06/2019

SDS number 5562

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Hazard statements in full

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child if swallowed.
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.
H413 May cause long lasting harmful effects to aquatic life.
EUH208 Contains Reaction Mass of Dodecane-1-Thiol and Tridodecyl Trithiophosphite. May produce an allergic reaction.