

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

1.1. Product identifier

Product form	: Mixture
Product name	: Nordlub V-Synto LL3 SAE 5W-30
Product code	: 65644
Type of product	: NORDLUB
Product group	: Blend
Other means of identification	: Art. Nr.: 20084

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

1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use, Consumer use
Industrial/Professional use spec	: Non-dispersive use Used in closed systems
Function or use category	: Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

NORDLUB Deutschland GmbH
Lange Str. 49
D-21614 Buxtehude
Deutschland / Germany
T +49 (0)4161 / 55 905 - 0 - F +49 (0)4161 / 55 905 - 29
info@nordlub.de - www.nordlub.de

1.4. Emergency telephone number

Emergency number : +49 (0)4161 / 55 905 - 0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH208 - Contains Tris(branched-alkyl) borate. May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Comments : The mineral oils in the product contain < 3% DMSO extract (IP 346)

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	EC-No.: 253-249-4 REACH-no: 01-2119488911-28	1 – 2.4	Aquatic Chronic 4, H413
Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate	CAS-No.: 125643-61-0 EC-No.: 406-040-9 EC Index-No.: 607-530-00-7 REACH-no: 01-0000015551-76	1 – 2.4	Aquatic Chronic 4, H413
zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate)	CAS-No.: 2215-35-2 EC-No.: 218-679-9 REACH-no: 01-2119953275-34	0.1 – 0.99	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	CAS-No.: 84605-29-8 EC-No.: 283-392-8 REACH-no: 01-2119493626-26	0.25 – 0.49	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Tris(branched-alkyl) borate	EC-No.: Conf. REACH-no: 01-2120079516-48	0.1 – 0.49	Skin Sens. 1B, H317

Specific concentration limits:

Name	Product identifier	Specific concentration limits
zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate)	CAS-No.: 2215-35-2 EC-No.: 218-679-9 REACH-no: 01-2119953275-34	(10 <C ≤ 100) Eye Dam. 1, H318 (10 ≤C < 100) Eye Irrit. 2, H319
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	CAS-No.: 84605-29-8 EC-No.: 283-392-8 REACH-no: 01-2119493626-26	(6.25 ≤C < 100) Skin Irrit. 2, H315 (10 ≤C < 12.5) Eye Irrit. 2, H319 (12.5 ≤C < 100) Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Not expected to require first aid measures.
First-aid measures after skin contact : Wash skin with mild soap and water.
First-aid measures after eye contact : In case of eye contact, immediately rinse with clean water for 10-15 minutes.
First-aid measures after ingestion : Do not induce vomiting. Rinse mouth. Get immediate medical advice/attention.

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

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/effects after eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.

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Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water fog. Foam. Powder. Dry chemical product.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.
Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing and gloves.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and gloves.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Impound and recover large spill by mixing it with inert granular solids.
Methods for cleaning up : Detergent. Take up liquid spill into absorbent material sand, saw dust, kieselguhr.
Other information : Spill area may be slippery. Use suitable disposal containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required.
Handling temperature : < 40 °C
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : ≤ 40 °C
Storage area : Store in dry, cool, well-ventilated area.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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Belgium - Occupational Exposure Limits	
Local name	Huiles minérales (brouillards) # Olie (minerale-; nevel)
OEL TWA	5 mg/m ³
OEL STEL	10 mg/m ³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Safety glasses. Gloves.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

Hand protection:

Permeation time: minimum >480min long term exposure; material / thickness [mm]: >0,35 mm. Nitrile rubber (NBR) /

8.2.2.3. Respiratory protection

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Oily liquid.
Colour	: brown.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 230 °C @ ASTM D92
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 851 kg/m ³ @ 15°C
Solubility	: Slightly soluble, the product remains on the water surface.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 64.5 mm ² /s @ 40°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidizers. acids. Bases.

10.6. Hazardous decomposition products

None under normal conditions.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

LD50 oral rat	> 2000 mg/kg OECD 401
LD50 dermal rat	> 2000 mg/kg OECD 402

zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)

LD50 oral rat	2230 mg/kg OECD 401
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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Viscosity, kinematic	64.5 mm ² /s @ 40°C
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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Reaction products of Benzeneamine, N-phenyl- with nonene (branched)

LC50 - Fish [1]	> 100 mg/l (Brachydanio rerio)
EC50 - Crustacea [1]	> 100 mg/l (Daphnia magna)
EC50 - Other aquatic organisms [2]	> 1000 mg/l
EC50 72h - Algae [1]	600 mg/l 3d - Chlorophyta

Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

LC50 - Fish [1]	> 74 mg/l OECD 203, (Danio rerio, 96h)
EC50 - Crustacea [1]	> 100 mg/l OECD 202, (Daphnia magna, 24h)
EC50 - Other aquatic organisms [1]	0 mg/l
EC50 72h - Algae [1]	> 3 mg/l OECD 201, (Desmodesmus subspicatus, 72h)

zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)

LC50 - Fish [1]	4.5 mg/l @Oncorhynchus mykiss
LC50 - Fish [2]	46 mg/l @Cyprinodon variegatus
EC50 - Crustacea [1]	23 mg/l Daphnia magna

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zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)	
EC50 72h - Algae [1]	21 mg/l
NOEC (acute)	1.8 mg/l @Oncorhynchus mykiss
NOEC chronic crustacea	0.4 mg/l
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
LC50 - Fish [1]	4.5 mg/l Oncorhynchus mykiss
LC50 - Fish [2]	46 mg/l Cyprinodon varietagus
EC50 - Crustacea [1]	23 mg/l
EC50 - Crustacea [2]	0.8 mg/l @21d
EC50 - Other aquatic organisms [2]	10000 mg/l @0,1d - Chlorophyta
EC50 72h - Algae [1]	21 mg/l @3d - Chlorophyta
NOEC (acute)	1.8 mg/l @4d - Oncorhynchus mykiss
NOEC (chronic)	10 mg/l @2d - Daphnia
NOEC chronic fish	0.4 mg/l @21d - Daphnia
NOEC chronic algae	10 mg/l @3d - Chlorophyta
Tris(branched-alkyl) borate	
LC50 - Fish [1]	6.4 mg/l (Oncorhynchus mykiss)
EC50 - Crustacea [1]	5.7 ml/l
EC50 72h - Algae [1]	21 mg/l (Selenastrum capricornutum)
NOEC chronic crustacea	1.9 mg/l @21d (Daphnia magna)
NOEC chronic algae	5.2 mg/l (Selenastrum capricornutum)
12.2. Persistence and degradability	
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Persistence and degradability	Not soluble in water, so only minimally biodegradable.
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	
Biodegradation	0 % @28d OECD TG 301 B
Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)	
Persistence and degradability	The product is not biodegradable.
Biodegradation	2 – 4 % OECD 301B
zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)	
Biodegradation	1.5 % Sturm (28d)
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
Biodegradation	1.5 % @28d - OECD TG 301 B
Tris(branched-alkyl) borate	
Biodegradation	74 % @28d OECD TG 301B

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12.3. Bioaccumulative potential

Reaction products of Benzeneamine, N-phenyl- with nonene (branched)

Bioconcentration factor (BCF REACH)	1584.89
Partition coefficient n-octanol/water (Log Kow)	10.88

Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

BCF - Fish [1]	260 OECD 305 (Oncorhynchus mykiss, 35d)
Partition coefficient n-octanol/water (Log Pow)	9.2

zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)

Bioconcentration factor (BCF REACH)	2.2 (0,1d)
Partition coefficient n-octanol/water (Log Kow)	2.21 @20°C

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)

Partition coefficient n-octanol/water (Log Kow)	0.56 Measurements
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12.4. Mobility in soil

Reaction mass of isomers of C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

Ecology - soil	Adsorbs into the soil.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Additional information : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1 UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

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14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

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Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts is listed

SZW-lijst van mutagene stoffen : Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Sweden

Swedish product registration number : 680798-6

Switzerland

Storage class (LK) : LK 10/12 - Liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
3	Composition/information on ingredients	Modified	

Abbreviations and acronyms:

	ACGIH: American Conference of Governmental Industrial Hygienists
	TWA: Time Weighted Average
	TLV: Threshold Limit Value
	ASTM: American Society for Testing and Materials
	ADR: Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route
	RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
	ADNR: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
	IMDG: International Maritime Dangerous Goods
	ICAO: International Civil Aviation Organization

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Abbreviations and acronyms:

	IATA: International Air Transport Association
	STEL: Short Term Exposure Limit
	LD50: median Lethal Dose for 50% of subjects
	ATE: acute toxicity estimate
	LC50: median Lethal Concentration for 50% of subjects
	EC50: concentration producing 50% effect

Other information

: The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
EUH208	Contains Tris(branched-alkyl) borate. May produce an allergic reaction.
EUH210	Safety data sheet available on request.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.