

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 13/02/2013 Revision date: 7/01/2019 Supersedes: 29/09/2017 Version: 5.1

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

1.1. Product identifier

Product form : Mixture
Product name : WOLF ECOTECH 0W20 D1 FE
Product code : 16104
Product group : Blend

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

WOLF OIL CORPORATION N.V.
Georges Gilliotstraat, 52
2620 Hemiksem - België
T 0032 (0)3 870 00 00 - F 0032 (0)3 870 00 99
info@wolfoil.com

1.4. Emergency telephone number

Emergency number : +32 14 58 45 45 (NL/EN/FR/DE)

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 : EUH210 - Safety data sheet available on request.
EUH208 - Contains Alkyl alcohol triester with boric acid (H3BO3). May produce an allergic reaction.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Baseoil - unspecified	(CAS No) 64742-54-7 (EC no) 265-157-1 (EC index no) 649-467-00-8 (REACH-no) 01-2119484627-25	45 - 65	Asp. Tox. 1, H304
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	(CAS No) 36878-20-3 (EC no) 253-249-4 (REACH-no) 01-2119488911-28	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	1 - 2,4	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Alkyl alcohol triester with boric acid (H3BO3)	(EC no) 806-750-2 (REACH-no) 01-21200079516-48	0,1 - 0,99	Skin Sens. 1B, H317

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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	0,1 - 0,49	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
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	
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-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/injuries after inhalation	: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact	: Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/injuries after eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/injuries 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

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information	: 5 mg/m ³ for oil mists (TWA, 8h-workday) recommended, based upon the ACGIH TLV (Analysis according to US NIOSH Method 5026, NIOSH Manual of Analytical Methods, 3rd Edition).
------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

8.2. Exposure controls

Personal protective equipment:

Safety glasses. Gloves.

Hand protection:

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

Skin and body protection:

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

Respiratory protection:

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

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Oily liquid.
Colour	: Yellow-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	: > 210 °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	: 845 kg/m ³ @ 15°C
Solubility	: Slightly soluble, the product remains on the water surface.
Log Pow	: No data available
Viscosity, kinematic	: 45 mm ² /s @ 40°C
Viscosity, dynamic	: No data available

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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.

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

Baseoil - unspecified (64742-54-7)

LD50 oral	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

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

LD50 oral rat	2230 mg/kg OECD 401
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
Specific target organ toxicity (single exposure)	: Not classified

Baseoil - unspecified (64742-54-7)

NOAEL (dermal, rat/rabbit)	> 2000 mg/kg bodyweight
----------------------------	-------------------------

Specific target organ toxicity (repeated exposure)	: Not classified
----------------------------------------------------	------------------

Baseoil - unspecified (64742-54-7)

NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight/day
NOAEL (subacute, oral, animal/male, 28 days)	> 220 mg/kg bodyweight
NOAEL (subchronic, oral, animal/male, 90 days)	> 980 mg/kg bodyweight

Aspiration hazard	: Not classified
-------------------	------------------

WOLF ECOTECH 0W20 D1 FE

Viscosity, kinematic	45 mm ² /s @ 40°C
----------------------	------------------------------

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
------------------------	------------------

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Chronic aquatic toxicity : Not classified

Baseoil - unspecified (64742-54-7)

LC50 fish 1	> 100 mg/l
-------------	------------

Reaction products of Benzeneamine, N-phenyl- with nonene (branched) (36878-20-3)

LC50 fish 1	> 100 mg/l (Brachydanio rerio)
EC50 Daphnia 1	> 100 mg/l (Daphnia magna)
EC50 other aquatic organisms 2	> 1000 mg/l
EC50 72h algae (1)	600 mg/l 3d - Chlorophyta

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 Daphnia 1	23 mg/l
EC50 72h algae (1)	21 mg/l
NOEC (acute)	1,8 mg/l @Oncorhynchus mykiss
NOEC chronic crustacea	0,4 mg/l

Alkyl alcohol triester with boric acid (H3BO3)

LC50 fish 1	1,3 mg/l
EC50 Daphnia 1	2,6 mg/l
EC50 72h algae (1)	9 mg/l
NOEC chronic crustacea	1,9 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 Daphnia 1	23 mg/l
EC50 Daphnia 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

12.2. Persistence and degradability

WOLF ECOTECH 0W20 D1 FE

Persistence and degradability	Not soluble in water, so only minimally biodegradable.
-------------------------------	--------------------------------------------------------

Reaction products of Benzeneamine, N-phenyl- with nonene (branched) (36878-20-3)

Biodegradation	0 % @28d OECD TG 301 B
----------------	------------------------

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
----------------	----------------------------

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.3. Bioaccumulative potential

Baseoil - unspecified (64742-54-7)

Bioaccumulative potential	No data available.
---------------------------	--------------------

Reaction products of Benzeneamine, N-phenyl- with nonene (branched) (36878-20-3)

Bioconcentration factor (BCF REACH)	1584,89
Log Kow	10,88

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

Bioconcentration factor (BCF REACH)	2,2 (0,1d)
Log Kow	2,21 @20°C

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

Log Kow	0,56 Measurements
---------	-------------------

12.4. Mobility in soil

No additional information available

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 / RID / IMDG / IATA / ADN

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

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

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

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.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

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

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

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

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
	Supersedes	Modified	
	Revision date	Modified	
	Comments (on top of composition)	Added	

WOLF ECOTECH 0W20 D1 FE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.2	EUH-statements	Modified	
3	Composition/information on ingredients	Modified	
9.1	Density	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
	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
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Sensitisation — Skin, category 1B
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
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
EUH208	Contains Alkyl alcohol triester with boric acid (H3BO3). May produce an allergic reaction
EUH210	Safety data sheet available on request

SDS EU (REACH Annex II)

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