Safety Data Sheet

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

Date of issue: 25/06/2004 Revision date: 12/11/2018 Supersedes: 13/04/2016 Version: 5.0

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

1.1. Product identifier

Product form : Mixture

Product name : WOLF EXTENDTECH 75W90 LS GL 5

Product code : 2410
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]

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Signal word (CLP) : -

Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP) : P273 - Avoid release to the environment

P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations

EUH-statements : EUH208 - Contains Long chain alkyl dithiothiadiazole, Polysulphides, di-tert-Bu(68937-96-2),

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated,

esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl. 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

12/11/2018 EN (English) 1/8

Safety Data Sheet

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

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|-------------|---|
| 1-Decene, homopolymer, hydrogenated | (CAS No) 58037-01-4 (EC no) 500-183-1 (REACH-no) 01-2119486452-34 | 35 - 55 | Asp. Tox. 1, H304 |
| Polysulphides, di-tert-Bu | (CAS No) 68937-96-2 (EC no) 273-103-3 (REACH-no) 01-2119540515-43 | 1 - 4,9 | Skin Sens. 1B, H317 Aquatic Chronic 3, H412 |
| Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl | (EC no) 931-384-6 (REACH-no) 01-2119493620-38 | 0,1 - 0,99 | Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |
| Long chain alkyl dithiothiadiazole | (EC no) Conf. | 0,1 - 0,49 | Skin Sens. 1, H317 |
| Long chain alkenyl amine | (CAS No) 112-90-3 (EC no) 204-015-5 | 0,1 - 0,49 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| N-Cis-9-octadecenyl-1,3-propanediamine | (CAS No) 7173-62-8 (EC no) 230-528-9 (REACH-no) 01-2119487002-46 | 0,01 - 0,15 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits |
|---|--|-------------------------------|
| Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl | (EC no) 931-384-6 (REACH-no) 01-2119493620-38 | (C >= 50) 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

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

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.

12/11/2018 EN (English) 2/8

Safety Data Sheet

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

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information : 5 mg/m3 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.





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.

12/11/2018 EN (English) 3/8

Safety Data Sheet

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

Odour threshold : No data available No data available pΗ 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 180 °C @ ASTM D92 : No data available Auto-ignition temperature Decomposition temperature : No data available No data available Flammability (solid, gas) Vapour pressure No data available Relative vapour density at 20 °C : No data available Relative density : No data available : 873 kg/m3 @15°C Density

Solubility : Slightly soluble, the product remains on the water surface.

Log Pow : No data available
Viscosity, kinematic : 86 mm²/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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| 1-Decene, homopolymer, hydrogenated (58037-01-4) | |
|--|--------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rat | > 2000 mg/kg |
| LC50 inhalation rat (mg/l) | 5,2 mg/l/4h |

LD50 oral rat 1689 mg/kg

Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

12/11/2018 EN (English) 4/8

Safety Data Sheet

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

Specific target organ toxicity (repeated : Not classified

exposure)

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl

NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight/day @28d (OECD 407)

Aspiration hazard : Not classified

WOLF EXTENDTECH 75W90 LS GL 5

Viscosity, kinematic 86 mm²/s @ 40°C

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| 1-Decene, homopolymer, hydrogenated (58037-01-4) | | |
|--|---------------------------------------|--|
| LC50 fish 1 | > 1000 mg/l | |
| LC50 fish 2 | > mg/l | |
| LC50 other aquatic organisms 1 | > 1000 mg/l scenedes quadricauda @3hr | |
| EC50 72h algae (1) | > 1000 mg/l waterflea @2DY | |
| EC50 72h algae (2) | > 125 mg/l waterflea @21DY | |
| NOEC (acute) | 125 mg/l @Waterflea @21DY | |
| NOEC chronic algae | > 1000 @scenedesmus quadriacauda @3hr | |
| Long chain alkenyl amine (112-90-3) | | |
| LC50 fish 1 | 0,11 mg/l @96h | |
| EC50 Daphnia 1 | 0,011 mg/l @48h | |
| EC50 72h algae (1) | 0,03 mg/l | |
| Polysulphides, di-tert-Bu (68937-96-2) | | |

| Reaction products of 4-methyl-2-pentagod and diphosphorus pentagulfide propovulated esterified with diphosphorus pentagyide and | | |
|---|--------------------------|--|
| EC50 96h algae (1) | > 10000 mg/l Slib @0.1DY | |
| EC50 72h algae (2) | > 100 mg/l | |
| EC50 other aquatic organisms 1 | > mg/l | |
| EC50 Daphnia 1 | 63 mg/l @2d | |

LC50 fish 1

LC50 fish 2

EC50 Daphnia 1

EC50 T2h algae (1)

NOEC (chronic)

NOEC chronic crustacea

NOEC chronic algae

24 mg/l @4d Oncorhynchus mykiss

8,5 mg/l Pimephales promelas @4d

91,4 mg/l Daphnia magna

6,4 mg/l Selenastrum capricornutum

3,2 mg/l Oncorhynchus mykiss @4d

0,12 mg/l Daphnia magna @2d

NOEC chronic algae

1,7 mg/l Selenastrum capricornutum @4d

| N-Cis-9-octadecenyl-1,3-propanediamine (7173-62-8) | | |
|--|--------------------------------|--|
| LC50 fish 1 | > 0,1 mg/l (Brachydanio rerio) | |
| EC50 Daphnia 1 | > 0,01 mg/l (Daphnia magna) | |
| EC50 72h algae (1) | > 0,01 mg/l | |
| NOEC chronic crustacea | > 0,001 @21DY (Daphnia maga) | |

12.2. Persistence and degradability

| WOLF EXTENDIECH 75W90 LS GL 5 | | | |
|---|--|--|--|
| WOLF EXTENDITION TO WAS LO GE S | | | |
| Persistence and degradability | Not soluble in water, so only minimally biodegradable. | | |
| 1-Decene, homopolymer, hydrogenated (58037-01-4) | | | |
| Biodegradation | 2 % 28DY @ OECD TG 301D | | |
| Long chain alkenyl amine (112-90-3) | | | |
| Biodegradation | 66 % OECD 301B @28d | | |
| Polysulphides, di-tert-Bu (68937-96-2) | | | |
| Biodegradation | 13 % % @OECD TG @28d | | |
| Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl | | | |
| BOD (% of ThOD) | 3,6 % ThOD @28d inherent sediment | | |
| Biodegradation | 7,4 % Sturm (28d) OECD TG 301B | | |

12/11/2018 EN (English) 5/8

Safety Data Sheet

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

| 12.3. | Bioaccumulativ | e potential |
|-------|----------------|-------------|
| | | |

| 1-Decene, homopolymer, hydrogenated (58037-01-4) | | |
|--|------------|--|
| Log Kow | > 6,5 | |
| Polysulphides di-tert-Ru (68 | 2027-06-21 | |

Polysulphides, di-tert-Bu (68937-96-2)

Log Kow 6

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

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

12/11/2018 EN (English) 6/8

Safety Data Sheet

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

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

15.1.2. National regulations

Germany

VwVwS Annex reference

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

: Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen

SZW-lijst van mutagene stoffen

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: Polysulphides, di-tert-Bu is listed: Polysulphides, di-tert-Bu is listed

: None of the components are listed

: None of the components are listed

: None of the components are listed

Denmark

Recommendations Danish Regulation

: Pregnant/breastfeeding women working with the product must not be in direct contact with the product

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

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 |

12/11/2018 EN (English) 7/8

Safety Data Sheet

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

| 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:

| T dil text of TT and EoTT state | none. |
|---------------------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Sens. 1 | Sensitisation — Skin, Category 1 |
| Skin Sens. 1B | Sensitisation — Skin, category 1B |
| STOT RE 1 | Specific target organ toxicity — Repeated exposure, Category 1 |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H302 | Harmful if swallowed |
| H304 | May be fatal if swallowed and enters airways |
| H314 | Causes severe skin burns and eye damage |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H335 | May cause respiratory irritation |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| 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 . May produce an allergic reaction |
| | |

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

12/11/2018 EN (English) 8/8