WOLF AROW ISO 46

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 07/08/2003 Revision date: 17/11/2025 Supersedes version of: 05/08/2025 Version: 7.3

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	WOLF AROW ISO 46
Product code	:	4006
Type of product	:	WOLF
Product group	:	Blend

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

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

1.3. Details of the supplier of the safety data sheet

WOLF OIL CORPORATION N.V.
Georges Gilliotstraat, 52
2620 Hemiksem, Antwerpen
België
T 0032 (0)3 870 00 00, F 0032 (0)3 870 00 99
msds@wolfoil.com, https://www.wolflubes.com/

1.4. Emergency telephone number

Emergency number	:	0032 (0)3 870 00 00

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]

No labelling applicable

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2,6-Di-tert-butylphenol (128-39-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,6-Di-tert-butylphenol (128-39-2)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

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]
2,6-Di-tert-butylphenol	CAS-No.: 128-39-2 EC-No.: 204-884-0 REACH-no: 01-2119490822-33	0.1 – 0.24	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
2,6-Di-tert-butylphenol	CAS-No.: 128-39-2 EC-No.: 204-884-0 REACH-no: 01-2119490822-33	(35 ≤ C < 100) Skin Irrit. 2; H315

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.

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

For non-emergency personnel

Protective equipment : Wear suitable protective clothing and gloves.

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.

Germany

Storage class (LGK, TRGS 510) : LGK 10-13 - Other combustible and non-combustible substances

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

WOLF AROW ISO 46	
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³

WOLF AROW ISO 46	
OEL STEL	10 mg/m³

8.2. Exposure controls

Personal protection equipment

Personal protective equipment:
Safety glasses. Gloves.

Personal protective equipment symbol(s):



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) /

Respiratory protection

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
Colour	:	Yellow-brown.
Appearance	:	Oily liquid.
Odour	:	Characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	> 200 °C @ ASTM D92
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	46 mm²/s @ 40°C
Solubility	:	Slightly soluble, the product remains on the water surface.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	0.88 g/ml @15°C
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

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 hazard classes as defined in Regulation (EC) No 1272/2008

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

2,6-Di-tert-butylphenol (128-39-2)	
LD50 oral rat	> 5000 mg/kg (OECD 401)
LD50 dermal rabbit	> 10000 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified

2,6-Di-tert-butylphenol (128-39-2)	
Skin sensitization, Guinea pig	Negative (OECD 406)

Germ cell mutagenicity : Not classified

2,6-Di-tert-butylphenol (128-39-2)	
Bacterial Reverse Mutation Test, In vitro, Bacteria Bacteria	Negative (OECD 471)
Mammalian Chromosomal Aberration, In vitro, mammalian	Negative (OECD 473)

Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

2,6-Di-tert-butylphenol (128-39-2)	
NOAEL (subacute, oral, 28 days)	100 mg/kg bodyweight/day (407 Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (subchronic, oral, 90 days)	270 mg/kg bodyweight/day (408 Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

WOLF AROW ISO 46	
Viscosity, kinematic	46 mm²/s @ 40°C

11.2. Information on other hazards

No additional information available

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

2,6-Di-tert-butylphenol (128-39-2)	
LC50 - Fish [1]	1.4 mg/l @96h (Pimephales promelas)
EC50 - Crustacea [1]	0.45 mg/l @48h (Daphnia magna)
EC50 - Other aquatic organisms [1]	> 1000 mg/l @3h Microorganism
EC50 72h - Algae [1]	1.2 mg/l @96h (Pseudokirchneriella subcapitata)
NOEC chronic crustacea	0.035 mg/l @21d Daphnia magna
NOEC chronic algae	0.64 mg/l Pseudokirchneriella subcapitata @96h

12.2. Persistence and degradability

WOLF AROW ISO 46	
Persistence and degradability	Not soluble in water, so only minimally biodegradable.

2,6-Di-tert-butylphenol (128-39-2)	
Persistence and degradability	Rapidly degradable
Biodegradation	≥ 12 – ≤ 24 % @28d (OECD ECHA 302C)

12.3. Bioaccumulative potential

2,6-Di-tert-butylphenol (128-39-2)	
Partition coefficient n-octanol/water (Log Pow)	4.5

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2,6-Di-tert-butylphenol (128-39-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,6-Di-tert-butylphenol (128-39-2)

12.6. Endocrine disrupting properties

No additional information available

12.7. 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.
European List of Waste (LoW, EC 2000/532) : 13 02 05* - mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

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

14.1. UN number or ID number

Not regulated for transport

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

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. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List < 0.1% or SCL.

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Regulation (EU) 2021/821 for the control of dual-use items

Contains no substance subject to the Regulation (EU) 2021/821 for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

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

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	None of the components are listed
SZW-lijst van mutagene stoffen	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	None of the components are listed
SZW-lijst van reprotoxische 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**	**Comments**
	Supersedes	**Modified**
	Revision date	**Modified**
7	Storage class (LK)	**Added**
15.1	Water Protection Ordinance (GSchV, SR 814.201)	**Added**

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 Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.