

# Safety Data Sheet (UK REACH) (GB)

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

1.1 Product identifier

**Arcanol MULTI2** 

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

Lubricant

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company Schaeffler Technologies AG & Co. KG

Georg-Schäfer-Str. 30

97421 Schweinfurt / GERMANY Phone +49 (0)9721 91 - 0 Homepage www.schaeffler.com

Address enquiries to

Technical informationsupport.is@schaeffler.comSafety Data Sheetsdb@chemiebuero.de

1.4 Emergency telephone number

**Advisory body** +49 (0)89-19240 (24h) (English)

**SECTION 2: Hazards identification** 

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

No classification.



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#### 2.2 Label elements

The product is required to be labelled in accordance with regulation

CLP.

Hazard pictograms none
Signal word none
Hazard statements none
Precautionary statements none

**Special labelling** EUH210 Safety data sheet available on request.

Contains: Zinc naphthenate. EUH208 May produce an allergic

reaction.

#### 2.3 Other hazards

**Environmental hazards** Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of

knowledge.

# **SECTION 3: Composition / Information on ingredients**

#### 3.1 Substances

not applicable



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#### 3.2 Mixtures

#### The product is a mixture.

Range [%]	Substance
1 - < 2.5	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)
	CAS: 4259-15-8, EINECS/ELINCS: 224-235-5, Reg-No.: 01-2119493635-27-XXXX
	GHS/CLP: Eye Dam. 1: H318 - Aquatic Chronic 2: H411
	SCL [%]: >50 - 100: Eye Dam. 1: H318
< 1	Zinc naphthenate
	CAS: 84418-50-8, EINECS/ELINCS: 282-762-6, Reg-No.: 01-2119988500-34-XXXX
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 3: H412
0 - < 1	Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts
	CAS: 68457-79-4, EINECS/ELINCS: 270-608-0
	GHS/CLP: Skin Irrit. 2: H315 - Eye Dam. 1: H318 - Aquatic Chronic 2: H411

Comment on component parts

Contains less than 3% w/w DMSO-extract (only for mineral oils) All chemical substances in this material are included on or exempted

from listing on the ENCS Inventory.

All chemical substances in this material are included on or exempted

from listing on the IECSC Inventory.

Substances of Very High Concern - SVHC: substances are not

contained or are below 0.1%.

For full text of H-statements: see SECTION 16.

# **SECTION 4: First aid measures**

### 4.1 Description of first aid measures

**General information** Take off contaminated clothing and wash before reuse.

**Inhalation** Not required under normal conditions.

Ensure supply of fresh air.

In the event of symptoms seek medical treatment.

**Skin contact** When in contact with the skin, clean with soap and water.

Consult a doctor if skin irritation persists.

**Eye contact** Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion** Seek medical advice immediately.

Do not induce vomiting.

Rinse mouth.



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

Irritant effects

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

Treat symptomatically.

Forward this sheet to your doctor.

# SECTION 5: Fire-fighting measures

#### 5.1 **Extinguishing media**

Carbon dioxide. Suitable extinguishing

Water spray jet. Dry powder.

Foam.

**Extinguishing media that** must not be used

Full water jet.

#### 5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

Carbon monoxide (CO) Nitrogen oxides (NOx).

#### Advice for firefighters 5.3

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of

in accordance within the local regulations. Cool containers at risk with water spray jet.

## SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.

Forms slippery surfaces with water. Use personal protective equipment.

#### 6.2 **Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

#### 6.3 Methods and material for containment and cleaning up

Take up mechanically.

Dispose of absorbed material in accordance within the regulations.



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#### 6.4 Reference to other sections

See SECTION 8+13

# SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

No special measures necessary if used correctly.

Avoid contact with eyes and skin. Use personal protective equipment.

Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

Use barrier skin cream.

Keep away from food and drink.

Cloths contaminated with product should not be kept in trouser pockets.

Take off contaminated clothing and wash before reuse.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Prevent penetration into the ground.

Do not store together with oxidizing agents.

Do not store together with food and animal food/diet.

Keep container tightly closed.

#### 7.3 Specific end use(s)

See product use, SECTION 1.2



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SECTION 8: Exposure controls / personal protection

## 8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

not applicable

## **DNEL**

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
Industrial, dermal, Long-term - systemic effects, 9.6 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 6.6 mg/m³
general population, oral, Long-term - systemic effects, 0.19 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 4.8 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 1.67 mg/m³

## **PNEC**

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
sediment (freshwater), 0.322 mg/kg dw
sediment (seawater), 0.032 mg/kg dw
oral (food), 8.33 mg/kg
sewage treatment plants (STP), 3.8 mg/l
seawater, 4.6 µg/L
freshwater, 4 µg/L
soil, 0.062 mg/kg soil dw
Zinc naphthenate, CAS: 84418-50-8
soil, 6.38 mg/kg Boden dw
sediment (seawater), 3.19 mg/kg Sediment dw
sediment (freshwater), 31.93 mg/kg Sediment dw
sewage treatment plants (STP), 147.73 μg/L
seawater, 0.64 µg/L
freshwater, 6.39 µg/L



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8.2 **Exposure controls** 

Additional advice on system Ensure adequate ventilation on workstation.

design

Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

General exposure limit for oil mist should be noted.

Safety glasses. (EN 166:2001) Eye protection

The details concerned are recommendations. Please contact the **Hand protection** 

glove supplier for further information.

In full contact:

> 0.4mm; butyl rubber, > 120 min (EN 374-1/-2/-3)

light protective clothing Skin protection

Other Avoid contact with eyes and skin. Not required under normal conditions. Respiratory protection

Thermal hazards none

**Delimitation and monitoring** Comply with applicable environmental regulations limiting discharge

of the environmental exposition

to air, water and soil.



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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state pasty

Color

**Odor** characteristic

Odour threshold No information available.

pH-value not applicable
pH-value [1%] not applicable
Boiling point [°C] > 250°C/ 482°F
Flash point [°C] > 200°C/ 392°F

Flammability (solid, gas) [°C] No information available.

Lower explosion limit not applicable

Upper explosion limit not applicable

Oxidising properties no

Vapour pressure/gas

pressure [kPa]

No information available.

**Density [g/cm³]** ca. 0.9 (DIN 51757) (20 °C / 68,0 °F)

Relative density No information available.

Bulk density [kg/m³] not applicable
Solubility in water insoluble

**Solubility other solvents** No information available.

Partition coefficient [n-

octanol/water]

not applicable

**Kinematic viscosity** No information available.

Relative vapour density not applicable
Evaporation speed not applicable
Melting point [°C] > 180/356°F

Auto-ignition temperature No information available.

Decomposition temperature No information available.

[°C]

Particle characteristics No information available.

9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.



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## 10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

### 10.3 Possibility of hazardous reactions

Reactions with acids, alkalies and oxidizing agents.

If product is heated above decomposition temperature toxic vapours may be released.

# 10.4 Conditions to avoid

See SECTION 7

## 10.5 Incompatible materials

Strong oxidizing agent. Strong acids.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.



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SECTION 11: Toxicological information	

# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

## **Acute oral toxicity**

Product
LD50, oral, Rat, > 5000 mg/kg bw
Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
LD50, oral, Rat, 3100 mg/kg bw
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts, CAS: 68457-79-4
LD50, oral, Rat, 3600 mg/kg
Zinc naphthenate, CAS: 84418-50-8
LD50, oral, Rat, > 2000 mg/kg bw

## **Acute dermal toxicity**

	Product		
ſ	LD50, derm	I, Rabbit, > 5000 mg/kg bw	

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
LD50, dermal, Rabbit, 5000 mg/kg bw
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts, CAS: 68457-79-4
LD50, dermal, Rat, 20000 mg/kg
Zinc naphthenate, CAS: 84418-50-8
LD50, dermal, Rat, > 2000 mg/kg bw

## Acute inhalational toxicity

LC50, inhalative, Rat, > 0.42 mg/l/4h

Product
 Based on the available information, the classification criteria are not fulfilled.
Substance

Serious eye damage/irritation

Toxicological data of complete product are not available.

The undiluted substance CAS 4259-15-8 is an irritant while the 50%

formulation in mineral oil was not an irritant.

Based on the available information, the classification criteria are not fulfilled.

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8



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Causes serious eye damage.	
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	s, CAS: 68457-79-4
Causes serious eye damage.	
Zinc naphthenate, CAS: 84418-50-8	
Eye, Rabbit, OECD 405, non-irritating	

Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
no adverse effect observed
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts, CAS: 68457-79-4
irritant
Zinc naphthenate, CAS: 84418-50-8
dermal, Rabbit, OECD 404, non-irritating

# Respiratory or skin sensitisation

Based on the available information, the classification criteria are not fulfilled.

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
no adverse effect observed
 Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts, CAS: 68457-79-4
no adverse effect observed
Zinc naphthenate, CAS: 84418-50-8
dermal, Guinea pig, OECD 406, sensitising

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
NOAEL, oral, Rat, 125 mg/kg bw/day
Zinc naphthenate, CAS: 84418-50-8
NOAEL, oral, Rat, 50 mg/kg bw/day

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Substance
Substance



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Zinc naphthenate, CAS: 84418-50-8	
InVivo. OECD 474, negativ	
InVitro, OECD 471, negativ	

Reproduction toxicity

Based on the available information, the classification criteria are not

fulfilled.

Substance
Zinc naphthenate, CAS: 84418-50-8
NOAEL, oral, Rat, 188 mg/kg bw/day
NOAEL, oral, Rat, 250 mg/kg bw/day

**Carcinogenicity** Based on the available information, the classification criteria are not

fulfilled.

**Aspiration hazard** Based on the available information, the classification criteria are not

fulfilled.

**General remarks** 

Toxicological data of complete product are not available.

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

### 11.2 Information on other hazards

**Endocrine disrupting** 

properties

No information available.

Other information No information available.



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SECTION 12: Ecological information		

## 12.1 Toxicity

Product
LL0, fish, 10 - 100 mg/l
T

Substance
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
EL50, (48h), Daphnia magna, 75 mg/l (OECD 202)
NOEC, (21d), Daphnia magna, 0.4 mg/l (OECD 211)
LL50, (96h), Rainbow trout, 4.4 mg/l
ErL50, (72h), Scenedesmus subspicatus, 410 mg/l (OECD 201)
EbL50, (72h), Scenedesmus subspicatus, 240 mg/l (OECD 201)
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts, CAS: 68457-79-4
LC50, (96h), fish, 4.5 mg/l (OECD 203)
EC50, (48h), Daphnia magna, 5.4 mg/l (OECD 202)
Zinc naphthenate, CAS: 84418-50-8
LC50, (4d), fish, 112 - 5620 μg/L
EC50, (4d), Algae, 18.1 - 80.5 mg/L
EC50, (48h), Invertebrates, 155 - 20 000 µg/L

## 12.2 Persistence and degradability

Behaviour in environment No

compartments

No information available.

**Behaviour in sewage plant** The product floats on the (waste) water.

Can be separated out mechanically in purification plants.

**Biological degradability** CAS 4259-15-8: < 5%. 27d

## 12.3 Bioaccumulative potential

No information available.

## 12.4 Mobility in soil

The product is insoluble in water.

## 12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.



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### 12.6 Endocrine disrupting properties

No information available.

### 12.7 Other adverse effects

Ecological data of complete product are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

#### **Product**

Disposal in an incineration plant in accordance with the regulations of

the local authorities. In according to RoHS!

Coordinate disposal with the disposal contractor/authorities if

necessary.

Waste no. (recommended)

120112\* spent waxes and fats

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Uncontaminated packaging may be reused.

Waste no. (recommended) 1501

150110\* packaging containing residues of or contaminated by

hazardous substances

150102 150104

## **SECTION 14: Transport information**

### 14.1 UN number or ID number

Transport by land according not applicable

to ADR/RID

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG

not applicable

Air transport in accordance not applicable

with IATA



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14.2 UN proper shipping name

Transport by land according NO DANGEROUS GOODS

to ADR/RID

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG

NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance NOT CLASSIFIED AS "DANGEROUS GOODS"

with IATA

14.3 Transport hazard class(es)

Transport by land according not applicable

to ADR/RID

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG

not applicable

Air transport in accordance not applicable

with IATA

14.4 Packing group

Transport by land according not applicable

to ADR/RID

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG

not applicable

Air transport in accordance not applicable

with IATA



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#### 14.5 Environmental hazards

Transport by land according no to ADR/RID

Inland navigation (ADN) no

Marine transport in accordance with IMDG

no

Air transport in accordance no with IATA

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

### 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

**EEC-REGULATIONS** 2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004;

(EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014

**TRANSPORT-** ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)

NATIONAL REGULATIONS

(GB):

EH40/2005 Workplace exposure limits (Second edition, published

December 2011); UK REACH; GB CLP.

- Observe employment restrictions for people

no

- VOC (2010/75/CE) 0 %

### 15.2 Chemical safety assessment

not applicable



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**SECTION 16: Other information** 

## 16.1 Hazard statements (SECTION 3)

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

H315 Causes skin irritation.

H411 Toxic to aquatic life with long lasting effects.

H318 Causes serious eye damage.



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### 16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

ATE = acute toxicity estimate

CAS = Chemical Abstracts Service

CLP = Classification, Labelling and Packaging

DMEL = Derived Minimum Effect Level

DNEL = Derived No Effect Level

EC50 = Median effective concentration

ECB = European Chemicals Bureau

EEC = European Economic Community

EINECS = European Inventory of Existing Commercial Chemical Substances

EL50 = Median effective loading

ELINCS = European List of Notified Chemical Substances

EmS = Emergency Schedules

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC-Code = International Code for the Construction and Equipment of

Ships carrying Dangerous Chemicals in Bulk

IC50 = Inhibition concentration, 50%

IMDG = International Maritime Code for Dangerous Goods

IUCLID = International Uniform Chemical Information Database

IVIS = In vitro irritation score

LC50 = Lethal concentration, 50%

LD50 = Median lethal dose

LC0 = lethal concentration, 0%

LOAEL = lowest-observed-adverse-effect level

LL50 = Median lethal loading

LQ = Limited Quantities

MARPOL = International Convention for the Prevention of Marine

Pollution from Ships

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

PBT = Persistent, Bioaccumulative and Toxic substance

PNEC = Predicted No-Effect Concentration

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

STP = Sewage Treatment Plant

TLV®/TWA = Threshold limit value – time-weighted average

TLV®STEL = Threshold limit value - short-time exposure limit

VOC = Volatile Organic Compounds

vPvB = very Persistent and very Bioaccumulative

#### 16.3 Other information

Classification procedure



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**Modified position** 

none