Arcanol LOAD400

Safety Data Sheet (SDS) according to OSHA-GHS (29CFR1910.1200HCS2012) (US)

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

1.1 Product identifier

Arcanol LOAD400

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 Group USA Inc.
308 Springhill Farm Road
Fort Mill, South Carolina 29715 / USA
Phone +1 803 548 8500
Homepage www.schaeffler.us
E-mail info.usa@schaeffler.com

Address enquiries to

Technical information support.is@schaeffler.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body US Chemtrec: +1 800 424-9300 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Sens. 1: H317 May cause an allergic skin reaction.

2.2 Label elements

The product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2012)

Hazard pictograms

Signal word WARNING

Contains: Polysulfides, di-tert-dodecyl, CAS: 68425-15-0

Naphthenic acids, zinc salts, basic, CAS: 84418-50-8

Hazard statements H317 May cause an allergic skin reaction.

Precautionary statements P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of water/soap.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

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2.3 Other hazards

Human health dangers High Pressure Applications. Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards None

This product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200.

SECTION 3: Composition / Information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
<= 10	Polysulfides, di-tert-dodecyl
	CAS: 68425-15-0
< = 1.8	Naphthenic acids, zinc salts, basic
	CAS: 84418-50-8
< = 0.23	Zinc oxide
	CAS: 1314-13-2

Comment on component parts

All chemical substances in this material are included on or exempted from listing on the NZIoC-Inventory.
-
All chemical substances in this material are included on or exempted from listing on the IECSC Inventory.
contains less than 3% w/w DMSO-extract
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

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.
If skin irritation or rash occurs: Get medical advice/attention.

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.

4.2 Most important symptoms and effects, both acute and delayed

Hoarseness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.
Note: High Pressure ApplicationsInjections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing

Foam.
Dry powder.
Carbon dioxide.

Extinguishing media that must not be used

Water.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Nitrogen oxides (NOx).
Sulphur oxides (SOx).

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Wear suitable protective equipment. For personal protection see SECTION 8.

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.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
No special measures necessary if used correctly.
Avoid contact with eyes and skin. Use personal protective equipment.

Wash hands before breaks and after work.
Use barrier skin cream.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store together with oxidizing agents.

Keep container tightly closed.
Store in a dry place.
Do not keep at temperatures above 0°C / 32°F.
Recommended storage temperature: 5°C/41°F - 40°C/104°F

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (US)

Not applicable

DNEL

	Substance
	Zinc oxide, CAS: 1314-13-2
	Industrial, inhalative, Long-term - local effects, 0.5 mg/m³
	Industrial, dermal, Long-term - systemic effects, 83 mg/kg bw/day
	Industrial, inhalative, Long-term - systemic effects, 5 mg/m³
	general population, oral, Long-term - systemic effects, 0.83 mg/kg bw/day
	general population, dermal, Long-term - systemic effects, 83 mg/kg bw/day
	general population, inhalative, Long-term - systemic effects, 2.5 mg/m³

PNEC

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	oral (food), 66.7 mg/kg food
	sediment (freshwater), 3.85 mg/kg sediment dw
	sewage treatment plants (STP), 1 g/L
	sediment (seawater), 385 µg/kg sediment dw
	Zinc oxide, CAS: 1314-13-2
	seawater, 6.1 µg/l
	sewage treatment plants (STP), 100 µg/l
	sediment (freshwater), 117.8 mg/kg sediment dw
	sediment (seawater), 56.5 mg/kg sediment dw
	freshwater, 20.6 µg/l
	soil, 35.6 mg/kg soil dw
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	sewage treatment plants (STP), 147.73 µg/L
	seawater, 0.64 µg/L
	sediment (freshwater), 31.93 mg/kg Sediment dw
	sediment (seawater), 3.19 mg/kg Sediment dw
	soil, 6.38 mg/kg Boden dw
	freshwater, 6.39 µg/L

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. 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 limit for oil mist should be noted.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. 0.4 mm; Nitrile rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Not required under normal conditions. Avoid contact with eyes and skin.
Respiratory protection	Not required under normal conditions.
Thermal hazards	None
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	pasty
Color	amber colour
Odor	characteristic
Odor threshold	not required
pH-value	Not applicable
pH-value [1%]	Not applicable
Boiling point [°C]	No information available.
Flash point [°C]	228 (442.4 °F) (closed cup)
Flammability [°C]	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Oxidizing properties	No
Vapor pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	< 1 (20 °C / 68,0 °F)
Relative density	No information available.
Bulk density [kg/m³]	Not applicable
Solubility in water	virtually insoluble
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	Not applicable
Kinematic viscosity	No information available.
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	> 170
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	> 240
Particle characteristics	No information available.

9.2 Other information

Penetration number: 265 - 295 (0.1 mm) (25°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

10.4 Conditions to avoid

Heating (decomposition)

10.5 Incompatible materials

Strong oxidizing agent.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	LD50, oral, Rat, ca. 20000 mg/kg bw (ECHA)
	Zinc oxide, CAS: 1314-13-2
	LD50, oral, Rat, > 15000 mg/kg (OECD 401)
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	LD50, oral, Rat, > 2000 mg/kg bw

Acute dermal toxicity

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	LD0, dermal, Rat, 2000 mg/kg bw
	NOAEL, oral, Rat, 1000 mg/kg bw/day
	Zinc oxide, CAS: 1314-13-2
	LD50, dermal, Rat, > 2000 mg/kg
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	LD50, dermal, Rat, > 2000 mg/kg bw

Acute inhalational toxicity

	Substance
	Zinc oxide, CAS: 1314-13-2
	LC50, inhalative, Rat, > 5.7 mg/l (4h)
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	LC50, inhalative, Rat, > 0.42 mg/l/4h

Serious eye damage/irritation

Based on the information available, the classification criteria have not been fulfilled.
Slight irritant effect.

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	no adverse effect observed
	Zinc oxide, CAS: 1314-13-2
	Eye, non-irritating
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	Eye, Rabbit, OECD 405, non-irritating

Skin corrosion/irritation Based on the information available, the classification criteria have not been fulfilled.

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	no adverse effect observed
	Zinc oxide, CAS: 1314-13-2
	dermal, non-irritating
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	dermal, Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation May cause an allergic skin reaction.
Calculation method

	Substance
	Zinc oxide, CAS: 1314-13-2
	inhalative, non-sensitizing
	dermal, non-sensitizing
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	dermal, Guinea pig, OECD 406, sensitising

Specific target organ toxicity — single exposure Based on the information available, the classification criteria have not been fulfilled.

	Substance
	Zinc oxide, CAS: 1314-13-2
	inhalative, non-irritating

Specific target organ toxicity — repeated exposure Based on the information available, the classification criteria have not been fulfilled.

	Substance
	Zinc oxide, CAS: 1314-13-2
	NOAEL, oral, Rat, 13.3 mg/kg bw/day (subchronic), The effects observed are not sufficient for
	NOAEC, inhalative, Rat, 1.5 mg/m³ (subchronic), The effects observed are not sufficient for cla
	LOAEL, dermal, Rat, 75 mg/kg bw/day (subacute), The effects observed are not sufficient for c
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	NOAEL, oral, Rat, 50 mg/kg bw/day

Mutagenicity Based on the information available, the classification criteria have not been fulfilled.

	Substance
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8

	InVivo. OECD 474, negativ
	InVitro, OECD 471, negativ

Reproduction toxicity Based on the information available, the classification criteria have not been fulfilled.

	Substance
	Zinc oxide, CAS: 1314-13-2
	NOAEC, inhalative, Rat, 7.5 mg/m³ (subacute), no adverse effect observed
	Naphthenic acids, zinc salts, basic, CAS: 84418-50-8
	NOAEL, oral, Rat, 188 mg/kg bw/day
	NOAEL, oral, Rat, 250 mg/kg bw/day

Carcinogenicity Based on the information available, the classification criteria have not been fulfilled.

Aspiration hazard Based on the information available, the classification criteria have not been fulfilled.

General remarks

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. Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

	Substance
	Polysulfides, di-tert-dodecyl, CAS: 68425-15-0
	NOEC, (72h), Algae, 80 µg/L
	NOEC, (48h), Invertebrates, 100 µg/L
	Zinc oxide, CAS: 1314-13-2
	EC50, (48h), Invertebrates, 155 - 100 000 µg/L
	EC50, (72h), Selenastrum capricornutum, 170 µg/l
	Naphthenic acids, zinc salts, basic, 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 compartments	
Behaviour in sewage plant	Not determined
Biological degradability	Not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

In according to RoHS!
Disposal in an incineration plant in accordance with the regulations of the local authorities.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Uncontaminated packaging may be reused.

RCRA Hazard Class (40CFR 261)

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

SECTION 14: Transport

14.1 UN number

Transport by land according to ADR/RID	Not applicable
Inland navigation (ADN)	Not applicable
Marine transport in accordance with IMDG	Not applicable
Air transport in accordance with IATA	Not applicable
DOT Road Shipment Information (49 CFR)	Not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID	NO DANGEROUS GOODS
Inland navigation (ADN)	NO DANGEROUS GOODS
Marine transport in accordance with IMDG	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA	NOT CLASSIFIED AS "DANGEROUS GOODS"
DOT Road Shipment Information (49 CFR)	NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	Not applicable
Inland navigation (ADN)	Not applicable
Marine transport in accordance with IMDG	Not applicable
Air transport in accordance with IATA	Not applicable
DOT Road Shipment Information (49 CFR)	Not applicable

14.4 Packing group

Transport by land according to ADR/RID	Not applicable
Inland navigation (ADN)	Not applicable
Marine transport in accordance with IMDG	Not applicable
Air transport in accordance with IATA	Not applicable
DOT Road Shipment Information (49 CFR)	Not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	No
Inland navigation (ADN)	No
Marine transport in accordance with IMDG	No
Air transport in accordance with IATA	No
DOT Road Shipment Information (49 CFR)	No

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

US Regulations

National regulations	29 CFR 1910.1200-HCS 2012, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65
- SARA, 302	No information available.
- SARA, 311	No information available.
- SARA, 313	No information available.
- CA Proposition 65	Some chemical substances Ethylene oxide; Methanol in this material are named in California-P65 list. ⚠ WARNING: This product can expose you to chemicals including "Ethylene oxide; Methanol", which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
- TSCA	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
- FDA	Not applicable
American Conference of Governmental Industrial Hygienists - ACGIH	Does not contain any relevant substances fulfilling the classification criteria.
International Agency for Research on Cancer IARC	Does not contain any relevant substances fulfilling the classification criteria.
National Toxicology Program - NTP	This product is not named NTP - National Toxicology Program.
HAP-VOC	Not applicable
Transport-regulations	DOT-Classification, ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

16.1 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;
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;
CAS = Chemical Abstracts Service;
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
CFR = Code of Federal Regulations;
CPR = Controlled Products Regulations;
DMEL = Derived Minimum Effect Level;
DNEL = Derived No Effect Level;
DOT = Department of Transportation;
EC50 = Median effective concentration;
EPA = Environmental Protection Agency;
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;
IARC = International Agency of Research on Cancer;
IATA = International Air Transport Association;
TSCA = Toxic Substance Control Act;
HMIS = Hazardous Materials Identification System;
NFPA = National Fire Protection Association;
NIOSH = National Institute for Occupational Safety and Health;
OSHA = Occupational Safety and Health Administration;
LC50 = Lethal concentration, 50%;
LD50 = Median lethal dose, 50%;
MARPOL = International Convention for the Prevention of Marine Pollution from Ships;
PBT = Persistent, Bioaccumulative and Toxic substance;
PNEC = Predicted No-Effect Concentration;
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals;
SARA = Superfund Amendments and Reauthorization Act;
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;

16.2 Ratings

NFPA Ratings

HMIS Ratings

PERSONAL PROTECTION:

A - Safety Glasses

B - Safety Glasses and Gloves

C - Safety Glasses, Gloves and Protection Apron

D - Face Shield, Gloves and Protection Apron

E - Safety Glasses, Gloves and Dust Respirator

F - Safety Glasses, Gloves, Protection Apron and Dust Respirator

G - Safety Glasses, Gloves and Vapor Respirator.

H - Splash Goggles, Gloves, Protection Apron and Vapor Respirator.

I - Safety Glasses, Gloves, Dust Respirator and Vapor Respirator.

J - Splash Goggles, Gloves, Protection Apron, Dust Respirator and Vapor Respirator.

K - Airline Mask or Hood, Gloves, Full Suit and Boots.

X - Personal protection rating to be supplied by user depending on use conditions

TOP, FLAMMABILITY: 1 - Slight Hazard
LEFT, HEALTH: 2 - Moderate Hazard
RIGHT, REACTIVITY: 0 - Minimal Hazard
BOTTOM, SPECIAL NOTICE: -

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

2 - Moderate Hazard
1 - Slight Hazard
0 - Minimal Hazard
X - Personal protection rating to be supplied by user depending on use conditions

Modified position

SECTION 2 been added: Naphthenic acids, zinc salts, basic

SECTION 2 been added: Polysulfides, di-tert-dodecyl

SECTION 3 been added: Zinc oxide

SECTION 3 been added: Naphthenic acids, zinc salts, basic

SECTION 3 been added: Polysulfides, di-tert-dodecyl