ARCALUB-C1

Safety Data Sheet (UK REACH) (UK)

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

1.1 Product identifier

ARCALUB-C1

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

1.2.1 Relevant uses

Gas generator to Schaeffler lubricator

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 information support.is@schaeffler.com

Safety Data Sheet sdb@chemiebuero.de (No dispatch of safety data sheets)
Safety data sheets are available from the supplier.

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]

Met. Corr. 1: H290 May be corrosive to metals.
Skin Corr. 1A: H314 Causes severe skin burns and eye damage.
Eye Dam. 1: H318 Causes serious eye damage.
Carc. 1A: H350i May cause cancer by inhalation.
STOT RE 2: H373 May cause damage to lung through prolonged or repeated exposure through inhale.
Aquatic Acute 1: H400 Very toxic to aquatic life.
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects.
Skin Sens. 1: H317 May cause an allergic skin reaction.

2.2 Label elements

This product is an article and therefore it does not require labelling according to regulations REACH/CLP.

2.3 Other hazards

Physico-chemical hazards	No particular hazards known.
Human health dangers	No particular hazards known.
Environmental hazards	Does not contain any PBT or vPvB substances.
Other hazards	none

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is an article.

Range [%]	Substance
20 - 40	Zinc powder - zinc dust (stabilized)
	CAS: 7440-66-6, EINECS/ELINCS: 231-175-3, EU-INDEX: 030-002-00-7, Reg-No.: 01-2119467174-37-XXXX
	GHS/CLP: Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1
4 - 20	Potassium hydroxide
	CAS: 1310-58-3, EINECS/ELINCS: 215-181-3, EU-INDEX: 019-002-00-8, Reg-No.: 01-2119487136-33-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1A: H314 - Eye Dam. 1: H318 - Met. Corr. 1: H290
	SCL [%]: >= 5: Skin Corr. 1A: H314, >=2 - <5: Skin Corr. 1A: H314, 0,5 - <2: Skin Irrit. 2: H315, 0,5 - <2: Eye Irrit. 2: H319
2 - 6	Nickel
	CAS: 7440-02-0, EINECS/ELINCS: 231-111-4, EU-INDEX: 028-002-00-7, Reg-No.: 01-2119438727-29-XXXX
	GHS/CLP: Skin Sens. 1: H317 - STOT RE 1: H372 - Carc. 2: H351 - Aquatic Chronic 3: H412
0,1 - 5	aluminium, compound with nickel (1:1)
	CAS: 12003-78-0, EINECS/ELINCS: 234-439-6, Reg-No.: 01-2120114076-68-XXXX
	GHS/CLP: Carc. 1A: H350i - Aquatic Chronic 3: H412

Comment on component parts	For full text of H-statements: see SECTION 16. The contained dangerous materials are not freely available with foreseeable use.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information none

Inhalation not applicable
Skin contact not relevant
Eye contact not relevant
Ingestion Consult a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing Carbon dioxide.
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.
Bursting batteries can be forcibly projected from a fire.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Wear full protective suit.

Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
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

Use personal protective clothing.

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.
Take up residues with absorbent material (e.g. sand, sawdust, general-purpose binder).
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

No special measures necessary if used correctly.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.

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

Store in a dry place.
Protect from heat/overheating.

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 (UK)

	Substance
	Potassium hydroxide
	CAS: 1310-58-3, EINECS/ELINCS: 215-181-3, EU-INDEX: 019-002-00-8, Reg-No.: 01-211948
	Short-term exposure (15-minute): 2 mg/m³
	Nickel
	CAS: 7440-02-0, EINECS/ELINCS: 231-111-4, EU-INDEX: 028-002-00-7, Reg-No.: 01-211943
	Long-term exposure: 0,5 mg/m³, Sk, Carc (nickel and water-insoluble nickel compounds (as Ni
	Copper
	CAS: 7440-50-8, EINECS/ELINCS: 231-159-6, EU-INDEX: 029-024-00-X
	Long-term exposure: 1 mg/m³, dusts and mists (as Cu), 0,2mg/m³* (fume)
	Short-term exposure (15-minute): 2 mg/m³

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

DNEL

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	There are no DNEL values established for the substance.
	Potassium hydroxide, CAS: 1310-58-3
	Industrial, inhalative, Long-term - local effects, 1 mg/m³
	general population, inhalative, Long-term - local effects, 1 mg/m³
	Nickel, CAS: 7440-02-0
	Industrial, inhalative, Long-term - local effects, 0,05 mg/m³
	Industrial, dermal, Long-term - local effects, 0,035 mg/cm²
	Industrial, inhalative, Long-term - systemic effects, 0,05 mg/m³
	Industrial, inhalative, Acute - local effects, 11,9 mg/m³
	general population, inhalative, Acute - local effects, 0,8 mg/m³
	general population, inhalative, Long-term - systemic effects, 60 ng/m³
	general population, inhalative, Long-term - local effects, 60 ng/m³
	general population, dermal, Long-term - local effects, 0,035 mg/cm²
	general population, oral, Long-term - systemic effects, 0,011 mg/kg bw/day
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	There are no DNEL values established for the substance.

PNEC

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0

	There are no PNEC values established for the substance.
	Potassium hydroxide, CAS: 1310-58-3
	There are no PNEC values established for the substance.
	Nickel, CAS: 7440-02-0
	freshwater, 7,1 µg/L
	seawater, 8,6 µg/L
	sewage treatment plants (STP), 0,33 mg/L
	sediment (freshwater), 109 mg/kg sediment dw
	sediment (seawater), 109 mg/kg sediment dw
	soil, 29,9 mg/kg soil dw
	oral (food), 0,12 mg/kg food
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	freshwater, 14,4 µg/L
	seawater, 7,2 µg/L
	sewage treatment plants (STP), 100 µg/L
	sediment (freshwater), 146,9 mg/kg sediment dw
	sediment (seawater), 162,2 mg/kg sediment dw
	soil, 83,1 mg/kg soil dw

8.2 Exposure controls

Additional advice on system design	Not required under normal conditions.
Eye protection	Not required under normal conditions.
Hand protection	Not required under normal conditions.
Skin protection	Not required under normal conditions.
Other	Not required under normal conditions.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	button cell
Color	silver-grey
Odor	odourless
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point or initial boiling point and boiling range [°C]	not applicable
Flash point [°C]	not applicable
Flammability	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/cm³]	not determined
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	not applicable
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Melting point [°C]	not applicable
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	not applicable
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.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

none

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Acute oral toxicity

	Product
	ATE-mix, oral, > 2000 mg/kg

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	LD50, oral, Rat, > 31 600 mg/kg bw
	Potassium hydroxide, CAS: 1310-58-3
	LD50, oral, Rat, > 214 -< 333 mg/kg
	Nickel, CAS: 7440-02-0
	LD50, oral, Rat, > 9000 mg/kg
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	LD50, oral, Rat, > 2000 mg/kg bw

Acute dermal toxicity

	Product
	ATE-mix, dermal, > 2000 mg/kg

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	LD50, dermal, Rabbit, > 2 mg/kg bw, Study, no adverse effect observed

Acute inhalational toxicity

	Product
	ATE-mix, inhalativ (mist), > 5 mg/l, 4h

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	LC50, inhalative, Rat, 2 mg/L (1h), no adverse effect observed
	Nickel, CAS: 7440-02-0
	NOAEC, inhalative, Rat, >= 10,2 mg/L/1h
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	LC50, inhalativ (dust), Rat, > 5410 mg/m³ air

Serious eye damage/irritation

Product is caustic.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	Eye, Rabbit, Study, non-irritating
	Potassium hydroxide, CAS: 1310-58-3
	Eye, Rabbit, corrosive
	Nickel, CAS: 7440-02-0
	non-irritating
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	Eye, non-irritating

Skin corrosion/irritation

Product is caustic.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

	Substance
	Potassium hydroxide, CAS: 1310-58-3
	dermal, corrosive
	Nickel, CAS: 7440-02-0
	non-irritating
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	dermal, non-irritating

Respiratory or skin sensitisation

May cause an allergic skin reaction.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	dermal, Guinea pig, OECD 406, non-sensitizing
	Potassium hydroxide, CAS: 1310-58-3
	Guinea pig, OECD SIDS KOH, negativ
	Nickel, CAS: 7440-02-0
	dermal, sensitising
	inhalative, no adverse effect observed
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	dermal, non-sensitizing

Specific target organ toxicity — single exposure

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Specific target organ toxicity — repeated exposure

May cause damage to lung through prolonged or repeated exposure through inhale.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

	Substance
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	NOAEC, inhalative, Rat, 1,48 mg/m³ (subchronic), The effects observed are not sufficient for c

Mutagenicity

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	in vitro, OECD 471, negativ
	Potassium hydroxide, CAS: 1310-58-3
	In vitro study, negativ
	Nickel, CAS: 7440-02-0
	in vitro, Chinese hamster lung fibroblasts, OECD 476, no adverse effect observed
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	in vitro, negativ
	in vivo, negativ

Reproduction toxicity

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

- Fertility

	Substance
	Potassium hydroxide, CAS: 1310-58-3
	negativ
	OEDE SIDS 2002
	Nickel, CAS: 7440-02-0
	NOAEL, oral, Rat, >= 10 mg/kg bw/day (P0, F1), OECD 416

- Development

	Substance
	Potassium hydroxide, CAS: 1310-58-3
	negativ
	OEDE SIDS 2002
	Nickel, CAS: 7440-02-0
	NOAEL, oral, Rat, >= 10 mg/kg bw/day (P0, F1), OECD 416

Carcinogenicity

May cause cancer by inhalation.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

	Substance
	Potassium hydroxide, CAS: 1310-58-3
	negativ
	Nickel, CAS: 7440-02-0
	Carc. 2 H351 (EU CLP); IARC 2B (USA)

Aspiration hazard

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.

General remarks

none

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

11.2.2 Other information none

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SECTION 12: Ecological information

12.1 Toxicity

	Substance
	aluminium, compound with nickel (1:1), CAS: 12003-78-0
	EC50, (72h), Desmodesmus subspicatus, 4,2 - 10 mg/L (OECD 201)
	Potassium hydroxide, CAS: 1310-58-3
	LC50, (24h), Gambusia affinis, 80 mg/l
	LC50, (24h), Poecilia reticulate, 165 mg/l
	EC50, (48h), Ceriodaphnia spec., 40,4 mg/l
	Nickel, CAS: 7440-02-0
	LC50, (96h), Oncorhynchus mykiss, 31,7 mg/l
	LC50, (96h), Pimephales promelas, 3,1 mg/l
	LC50, (96h), Brachidanio rerio, > 100 mg/l
	EC50, (72h), Algae, 0,1 mg/l
	EC50, (72h), Selenastrum capricornutum, 0,18 mg/l
	EC50, (96h), Daphnia sp., 510 µg/l
	Zinc powder - zinc dust (stabilized), CAS: 7440-66-6
	LC50, (48h), Invertebrates, 41 - 1220 µg/L
	EC50, (48h), Invertebrates, 155 - 2909 µg/L
	NOEC, (72d), fish, 440 µg/L
	NOEC, (3d), Cladophora glomerata, 60 µg/L

12.2 Persistence and degradability

Behaviour in environment compartments not applicable
Behaviour in sewage plant not applicable
Biological degradability not applicable

12.3 Bioaccumulative potential

not applicable

12.4 Mobility in soil

not applicable

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

None known.

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

For recycling, consult manufacturer.

Waste no. (recommended) 160604

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150102

SECTION 14: Transport information

14.1 UN number or ID 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

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"

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

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

14.5 Environmental hazards

Transport by land according to ADR/RID	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

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/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances ≥ 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains ≥ 0.1% of substances with the following restrictions. 27, 75
	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)
NATIONAL REGULATIONS (UK):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	none
- VOC (2010/75/CE)	not relevant

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H350i May cause cancer by inhalation.
H412 Harmful to aquatic life with long lasting effects.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H317 May cause an allergic skin reaction.

H290 May be corrosive to metals.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.

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

Met. Corr. 1: H290 May be corrosive to metals. (Calculation method)
Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (Calculation method)
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
Carc. 1A: H350i May cause cancer by inhalation. (Calculation method)
STOT RE 2: H373 May cause damage to lung through prolonged or repeated exposure through inhale. (Calculation method)
Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)

Modified position

none