SECTION 1: Identification of the substance / preparation and of the company

1.1 Product identifier

SILBO Silver Bath

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

1.2.1 Relevant uses

Cleaning agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Delu Ako Minky GmbH
Hauptstraße 103
53619 Rheinbreitbach / GERMANY
Phone (+49) 02224-1800-0
Fax (+49) 02224-1800-90
Homepage www.silbo.de
E-mail info@silbo.de

Address enquiries to

Technical information info@delu.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency phone

Advisory body +49 (0) 551-19240 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Eye Dam. 1: H318 Causes serious eye damage.
Skin Irrit. 2: H315 Causes skin irritation.

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

Xi, Irritant - R 36/38: Irritating to eyes and skin.

2.2 Label elements

The product is required to be labelled in accordance with EC-Directives.

Labelling according to Regulation (EC) 1272/2008

Hazard pictograms



Signal word DANGER

Contains: Fattyalcohol polyglycolether, C10-14 (6EO)

Hydrochloric acid

Hazard statements

H318 Causes serious eye damage.
H315 Causes skin irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

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

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
1 - < 5	Propan-2-ol
	CAS: 67-63-0, EINECS/ELINCS: 200-661-7, EU-INDEX: 603-117-00-0
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
	EEC: F-Xi, R 11-36-67
1 - <3	Fattyalcohol polyglycolether, C10-14 (6EO)
	CAS: 69227-22-1
	GHS/CLP: Eye Dam. 1: H318 - Acute Tox. 4: H302
	EEC: Xn, R 41-22
1 - <5	Hydrochloric acid
	CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X
	GHS/CLP: Skin Corr. 1B: H314 - STOT SE 3: H335 - Met. Corr. 1: H290
	EEC: C, R 34-37
0,1 - <1	Thiourea
	CAS: 62-56-6, EINECS/ELINCS: 200-543-5, EU-INDEX: 612-082-00-0
	GHS/CLP: Carc. 2: H351 - Repr. 2: H361d - Acute Tox. 4: H302 - Aquatic Chronic 2: H411, M = 1
	EEC: Xn-N, R 22-40-51/53-63

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements and R-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change soaked clothing.

Inhalation Ensure supply of fresh air.

Skin contact In case of contact with skin wash off with warm 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 Supply with medical care.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
If swallowed or in the event of vomiting, risk of product entering the lungs.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Foam, dry powder, water spray jet, carbon dioxide.

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.

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

Ensure adequate ventilation.
High risk of slipping due to leakage/spillage of product.
Use personal protective equipment.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
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.

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

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Provide acid-resistant floor.

Do not store with alkalies.
Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.

Keep container tightly closed.
Keep container in a well-ventilated 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 (GB)

Range [%]	Substance
1 - <5	Hydrochloric acid
	CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X
	Long-term exposure: 1 ppm, 2 mg/m³, gas and aerosol mists
	Short-term exposure (15-minute): 5 ppm, 8 mg/m³
1 - < 5	Propan-2-ol
	CAS: 67-63-0, EINECS/ELINCS: 200-661-7, EU-INDEX: 603-117-00-0
	Long-term exposure: 400 ppm, 999 mg/m³
	Short-term exposure (15-minute): 500 ppm, 1250 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
1 - <5	Hydrochloric acid
	CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X
	Eight hours: 5 ppm, 8 mg/m³
	Short-term (15-minute): 10 ppm, 15 mg/m³

DNEL

Range [%]	Substance
1 - < 5	Propan-2-ol, CAS: 67-63-0
	Industrial, inhalative, 500 mg/m³.
	Industrial, dermal, 888 mg/kg (1 d).
	general population, oral, 26 mg/kg (1 d).
	general population, inhalative, 89 mg/m³.
	general population, dermal, 319 mg/kg (1 d).

PNEC

Range [%]	Substance
1 - < 5	Propan-2-ol, CAS: 67-63-0
	soil, 28 mg/kg.
	sediment (seaater), 552 mg/kg.
	sediment (freshwater), 552 mg/kg.
	seawater, 140,9 mg/l.
	freshwater, 140,9 mg/l.

8.2 Exposure controls

Additional advice on system design	not applicable
Eye protection	Safety glasses.
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: Butyl rubber, >480 min (EN 374). In splash contact Butyl rubber, >120 min (EN 374).
Skin protection	Not required under normal conditions.
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. Avoid contact with eyes and skin.
Respiratory protection	not applicable
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	not determined
pH-value	<1
pH-value [1%]	not determined
Boiling point [°C]	100
Flash point [°C]	>65
Flammability [°C]	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	1
Bulk density [kg/m³]	not determined
Solubility in water	miscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature [°C]	not applicable

9.2 Other information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with alkalies (lyes).
Reactions with strong oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Range [%]	Substance
1 - <3	Fattyalcohol polyglycolether, C10-14 (6EO), CAS: 69227-22-1
	LD50, oral, 1800 mg/kg.
1 - <5	Hydrochloric acid, CAS: 7647-01-0
	LD50, oral, Rat: 700 mg/kg bw (IUCLID).
	LD50, dermal, Rabbit: > 5010 mg/kg.
0,1 - <1	Thiourea, CAS: 62-56-6
	LD50, dermal, Rabbit: > 2000 mg/kg (Lit.).
	LD50, oral, Rat: 1750 mg/kg (Lit.).
1 - < 5	Propan-2-ol, CAS: 67-63-0
	LD50, dermal, Rabbit: 13400 mg/kg.
	LD50, oral, Rat: 4570 mg/kg.
	LC50, inhalative, Rat: 30 mg/l 4h.

Serious eye damage/irritation	not determined
Skin corrosion/irritation	In-vitro-Test "Corrosive" negative.
Respiratory or skin sensitisation	not determined
Specific target organ toxicity — single exposure	not determined
Specific target organ toxicity — repeated exposure	not determined
Mutagenicity	not determined
Reproduction toxicity	not determined
Carcinogenicity	not determined
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.

SECTION 12: Ecological information

12.1 Toxicity

Range [%]	Substance
1 - <3	Fattyalcohol polyglycolether, C10-14 (6EO), CAS: 69227-22-1
	LC50, Brachidanio rerio: > 1-10 mg/l (DIN EN ISO 7346-2).
	EC0, Pseudomonas putida: > 100 mg/l (OECD-209).
1 - <5	Hydrochloric acid, CAS: 7647-01-0
	LC50, (96h), Lepomis macrochirus: 24,6 mg/l.
	EC50, (72h), Pseudokirchneriella subcapitata: 0,78 mg/l.
	EC50, (48h), Daphnia magna: 0,492 mg/l.
0,1 - <1	Thiourea, CAS: 62-56-6
	LC50, (96h), Danio rerio: 10000 mg/l (Lit.).
	EC50, (48h), Daphnia magna: 35 mg/l (IUCLID).
	IC50, (72h), Desmodesmus subspicatus: 3,8 - 10 mg/l (IUCLID).
1 - < 5	Propan-2-ol, CAS: 67-63-0
	EC50, (72h), Scenedesmus subspicatus: > 100 mg/l.
	EC50, (48h), Daphnia magna: 13299 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

Biological degradability The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.
Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

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 Other adverse effects

Harmful effect due to pH shift.
Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.

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

Coordinate disposal with the disposal contractor/authorities if necessary.
Dispose of as hazardous waste.

Waste no. (recommended) 070699

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110*

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

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)

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers.
- VOC (1999/13/CE)	ca. 3%

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 R-phrases (SECTION 3)

R 22: Harmful if swallowed.
R 40: Limited evidence of a carcinogenic effect.
R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 63: Possible risk of harm to the unborn child.
R 41: Risk of serious damage to eyes.
R 34: Causes burns.
R 37: Irritating to respiratory system.
R 11: Highly flammable.
R 36: Irritating to eyes.
R 67: Vapours may cause drowsiness and dizziness.

16.2 Hazard statements (SECTION 3)

H336 May cause drowsiness or dizziness.
H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H335 May cause respiratory irritation.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.
H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.
H351 Suspected of causing cancer.

16.3 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
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
ELINCS = European List of Notified Chemical Substances
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
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
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
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

16.4 Other information

Customs Tariff not determined

Classification procedure Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
Skin Irrit. 2: H315 Causes skin irritation. (Expert judgement)

Modified position

SECTION 2 been added: P280 Wear protective gloves/eye protection/face protection.

SECTION 2 been added: H318 Causes serious eye damage.

SECTION 2 been added: P102 Keep out of reach of children.

SECTION 2 been added: H315 Causes skin irritation.

SECTION 2 been added: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 2 been added: P337+P313 If eye irritation persists: Get medical advice/attention.

SECTION 2 been added: Eye Dam. 1

SECTION 2 been added: Ätzwirkung

SECTION 2 been added: DANGER

SECTION 2 been added: P101 If medical advice is needed, have product container or label at hand.

SECTION 4 been added: If eye irritation persists: Get medical advice/attention.

SECTION 4 been added: Forward this sheet to the doctor.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 7 been added: Do not eat, drink or smoke when using this product.

SECTION 7 been added: Protect from heat/overheating.

SECTION 7 been added: Take off contaminated clothing and wash before reuse.

SECTION 7 been added: Contaminated work clothing should not be allowed out of the workplace.

SECTION 13 been added: Coordinate disposal with the disposal contractor/authorities if necessary.

SECTION 13 been added: Dispose of as hazardous waste.

SECTION 15 been added: -

SECTION 16 deleted: Calculation method

SECTION 16 been added: Observe employment restrictions for mothers-to-be and nursing mothers.

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