SECTION 1. Identification of the substance/mixture and of the company/enterprise

1.1. Product identifier

Product name : DOMAL
Product code: refer to sales department

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

Alkaline cleaning
Sectors of use:
Industrial Manufacturing[SU3], Manufacture of food products[SU4]
Product category:
Washing and Cleaning Products (including solvent based products)
Process categories:
Use in batch and other process (syn- thesis) where opportunity for exposure arises[PROC4], Transfer of substance or mixture (charging and discharging) at dedicated facilities[PROC8B], Treatment of articles by dipping and pouring [PROC13]

Not recommended uses
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

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SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:
GHS05

Hazard Class and Category Code(s):
Met. Corr. 1, Skin Corr. 1, Eye Dam. 1

Hazard statement Code(s):
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.

The product can be corrosive to metals
Corrosive product: causes severe skin burns and eye damage.
If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

2.1.2 Additional information:

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):

GHS05 - Danger

Hazard statement Code(s):
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Supplemental Hazard statement Code(s):
EUH208 - Contains preservatives: Benzisothiazolinone. May produce an allergic reaction.

Precautionary statements:
Prevention
P260 - Do not breathe vapours/spray.
P280 - Wear protective gloves/clothing and eye/face protection.
Response
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains:
Potassium hydroxide, disodium metasilicate

Contains (Reg.EC 648/2004):
< 5% non-ionic surfactants, phosphates, EDTA and salts thereof, anionic surfactants
Preservatives: C(M)IT/MIT (3:1) , Benzisothiazolinone

2.3. Other hazards

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

The use of this chemical agent implies the obligation of the "risk assessment" by the employer according to the provisions of Legislative Decree April 9, 2008 no. 81 and subsequent amendments. If the results of the risk assessment demonstrate that, in relation to the type, quantity, methods and frequency of exposure, there is only a low risk for the safety and irrelevant for the health of the workers and that the measures referred to in paragraph 1 of Legislative Decree April 9, 2008 no. 81 are sufficient to reduce the risk, the provisions of articles 225, 226, 229, 230 of the same Legislative Decree do not apply
Do not ingest. Keep out of reach of children.

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
Disodium metasilicate	>= 3 < 5%	Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318; STOT SE 3, H335	014-010-00-8	6834-92-0	229-912-9	01-2119449811-37-XXXX
Tetrapotassium pyrophosphate	>= 3 < 5%	Eye Irrit. 2, H319		7320-34-5	230-785-7	01-2119489369-18-XXXX
Potassium hydroxide	>= 1 < 2,5%	Met. Corr. 1, H290; Acute Tox. 4, H302; Skin Corr. 1A, H314 Limits: Skin Corr. 1A, H314 %C >=5; Skin Corr. 1B, H314 2<= %C <5; Skin Irrit. 2, H315 0,5<= %C <2; Eye Irrit. 2, H319 0,5<= %C <2; ATE oral = 333,000 mg/kg	019-002-00-8	1310-58-3	215-181-3	01-2119487136-33-XXXX
Sodium etasulfate	>= 1 < 2,5%	Skin Irrit. 2, H315; Eye Dam. 1, H318 Limits: Eye Dam. 1, H318 %C >=20; Eye Irrit. 2, H319 10<= %C <20;		126-92-1	204-812-8	01-2119971586-23-XXXX
Sodium hydroxide substance for which there are Community workplace exposure limits	< 0,1%	Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318 Limits: Skin Corr. 1A, H314 %C >=5; Skin Corr. 1B, H314 2<= %C <5; Eye Irrit. 2, H319 0,5<= %C <2; Eye Dam. 1, H318 %C >=2; Skin Irrit. 2, H315 %C >=0,5;	011-002-00-6	1310-73-2	215-185-5	01-2119457892-27-XXXX
Benzisothiazolinone	< 0,036%	Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1A, H317; Eye Dam. 1, H318; Acute Tox. 2, H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Limits: Skin Sens. 1, H317 %C >=0,036; Acute toxicity M-factor = 1 Chronic toxicity M-factor = 1 ATE oral = 450,000 mg/kg ATE inhal = 0,210 mg/l/4 h	613-088-00-6	2634-33-5	220-120-9	01-2120761540-60-XXXX

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
C(M)IT/MIT (3:1) B	< 0,000149%	EUH071; Acute Tox. 3, H301; Acute Tox. 2, H310; Skin Corr. 1C, H314; Skin Sens. 1A, H317; Eye Dam. 1, H318; Acute Tox. 2, H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Limits: Skin Corr. 1C, H314 %C >=0,6; Skin Irrit. 2, H315 0,06<= %C <0,6; Eye Dam. 1, H318 %C >=0,6; Eye Irrit. 2, H319 0,06<= %C <0,6; Skin Sens. 1A, H317 %C >=0,0015; Acute toxicity M-factor = 100 Chronic toxicity M-factor = 1 ATE oral = 457,000 mg/kg ATE dermal = 660,000 mg/kg ATE inhal = 1,230 mg/l/4 h	613-167-00-5	55965-84-9	911-418-6	

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Ventilate the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:
Take off immediately contaminated clothing.
In case of contact with skin, wash immediately with watrer.
Immediately consult a physician.

Direct contact with eyes (of the pure product).:
Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately
Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Ingestion:
Rinse mouth immediately.
Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

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

Ingestion can cause chemical burns in the mouth and throat.
Contact with skin may cause burns.

In contact with eyes it causes very strong irritation, including redness and tearing.

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

In case of discomfort following contact with the product, go immediately to the emergency room and, if possible, show this document.
Symptomatic treatment.
UFI code on the label

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suggested extinguishing media:
Water spray, CO_2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing media to avoid:
Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus
Safety helmet and full protective clothing.
The water spray can be used to protect the people involved in the extinction.
You may also use self-contained breathing apparatus, especially when working in confined and poorly ventilated areas.
Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:
Move away from the area surrounding the spill or release.
Not smoking. Wear a mask, gloves and protective clothing.

6.1.2 For emergency responders:
Eliminate all naked flames and possible sources of ignition.
Do not smoke. Ensure adequate ventilation.
Evacuate the danger area and, if necessary, consult an expert.

6.2. Environmental precautions

Contain spills with earth or sand.

If the product has entered a watercourse, sewers or has contaminated soil or vegetation, notify the authorities.
Dispose of the waste material in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 Containment:
Rapidly recover the product, wear a mask and protective clothing (for specifications refer to section 8.2. SDS)
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert materia or sucked it.
Prevent it from entering the sewer system.

6.3.2 Cleaning up:
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors
Wear protective gloves/clothing and eye/face protection.
Handle the product after consulting all other sections of this safety data sheet.
At work do not eat or drink.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabelled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool and dry place, away from heat sources and direct exposure to sunlight.

7.3. Specific end use(s)

Industrial Manufacturing:
Handle with care. Store in a well-ventilated place, away from heat sources (7-30°C), in the original tightly closed packaging

Manufacture of food products:
Handle with care. Store in a well-ventilated place, away from heat sources (7-30°C), in the original tightly closed packaging

See the annex exposure scenario.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

==========

Related to contained substances:
Potassium hydroxide:
ACGIH - C: 2 mg/m3

Limit value – Eight hours
(ppm)/(mg/m3)
Austria: x/2 inhalable aerosol
Denmark: x/2
Hungary: x/2
Japan (JSOH): x/2(1)
Poland: x/0,5
Spain: x/2
Sweden: x/1
Switzerland: x/2 inhalable aerosol

Limit Value – Short Term
(ppm)/(mg/m3)
Austalia: x/2(1)
Belgium: x/2(1)(2)
Canada - Ontario: x/2(1)
Canada – Québec: x/2(1)
Denmark: x/2
Finland: x/2(1)
France: x/2
Hungary: x/2
Ireland: x/2(1)
New Zealand: x/2(1)
People's Republic of China: x/2(1)
Poland: x/1
Singapore: x/2
South Korea: x/2(1)
Sweden: x/2(1)
USA – NIOSH: x/2(1)
United Kingdom: x/2

Remarks:
Australia: (1) Celling limit value
Belgium: (1) Additional indication "M" means that irritation occurs when the exposure exceeds the limit value or there is a risk of acute poisoning. The work process must be designed in such a way that the exposure never exceeds the limit value. For evaluation, the sampled period should be as short as possible. However, the sampled period shall be long enough to perform a reliable measurement. The measured result shall be related to the considered period.
Canada – Ontario: (1) Celling limit value
Canada – Québec: (1) Celling limit value
Finland: (1) Celling limit value
Ireland: (1) 15 minutes reference period
Japan (JSOH): (1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day
New Zealand: (1) Celling limit value
People's Republic of China: (1) Celling limit value
South Korea: (1) Celling limit value
Sweden: (1) Inhalable dust (2) Celling limit value
USA – NIOSH: (1) Celling limit value (15 min)

Argentine: CMP-C: 2 mg mg/m3
Czech Republic: PEL 1 mg/m3/ NPK-P 2 mg/m3
Italy: ACGIH C2 mg/m3 - Note: URT, eye, and skin irr
Estonia: THRESHOLD (average concentration of the chemical inhaled in the air during a working day or a working week) 2 mg/m3

Norvay: ceiling value (a moment value that indicates the maximum concentration of a chemical in the breathing zone that should not be exceeded) 2 mg/m3
South Africa: Short Term OEL-CL mg/m³ 2

Sodium hydroxide:
Limit value – Eight hours
(ppm)/(mg/m3)
Austria: x/2 inhalable aerosol
Belgium: x/2 (1)
Denmark: x/2
France: x/2
Hungary: x/2
Japan (JSOH): x/2(1)
Latvia: x/0,5
Poland: x/0,5
Romania: x/1
Spain: x/2
Sweden: x/1 (1)
Switzerland: x/2 inhalable aerosol (MAK)
USA – OSHA: x/2

Limit Value – Short Term
(ppm)/(mg/m3)
Austalia: x/2(1)
Austria: x/4 inhalable aerosol
Canada - Ontario: x/2(1)
Canada – Québec: x/2(1)
Denmark: x/2
Finland: x/2(1)
Hungary: x/2
Ireland: x/2(1)
New Zealand: x/2(1)
People’s Republic of China: x/2(1)
Poland: x/1
Romaniax/3(1)
Singapore: x/2
South Korea: x/2(1)
Sweden: x/2(1)(2)
Switzerland: x/2 inhalable aerosol (MAK)
USA – NIOSH: x/2(1)
United Kingdom: x/2

Remarks:
Australia: (1) Celling limit value
Canada – Ontario: (1) Celling limit value
Canada – Québec: (1) Celling limit value
Finland: (1) Celling limit value
Ireland: (1) 15 minutes reference period
Japan: (1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day
New Zealand: (1) Celling limit value
People’s Republic of China: (1) Celling limit value
South Korea: (1) Celling limit value
Romania: (1) 15 minutes average value
Sweden: (1) Inhalable dust (2) Celling limit value
USA – NIOSH: (1) Celling limit value (15 min)
Argentine: CMP-C: 2 mg mg/m3

Czech Republic: PEL 1 mg/m3/ NPK-P 2 mg/m3
Italy: OEL: ACGIH -STEL: C 2.0 mg/m3; Tipo OEL: ACGIH - STEL: C2 mg/m3 - Note: URT, eye, and skin irr
Estonia: short-term esposure limit (maximum chemical substance average allowable concentration in inhaled air - 15 minutes) 2 mg/m3(Ceiling limit" means a maximum permissible continuous concentration of 15 minutes in the air for rapidly acting substances)
Norvay: ceiling value (a moment value that indicates the maximum concentration of a chemical in the breathing zone that should not be exceeded) 2 mg/m3
Lithuania: NRD 2 mg/m3
Slovakia: NPEL 2 mg/m3
South Africa: Short Term OEL-CL 2 mg/m³

C(M)IT/MIT (3:1):
Limit value - Eight hours
(ppm)/(mg/m³)

Austria: -/0,05
Germany (DFG): -/0,2 (1)
Switzerland: -/0,2 (1)

Limit value - Short term
(ppm)/(mg/m³)
Germany (DFG): -/0,4 (1)(2)
Switzerland: -/0,4 (1)

Germany (DFG) (1) Inhalable fraction (2) 15 minutes average value
Switzerland (1) inhalable fraction

- Substance: Disodium metasilicate
DNEL
Systemic effects Long term Workers inhalation = 6,22 (mg/m3)
Systemic effects Long term Workers dermal = 1,49 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 1,55 (mg/m3)
Systemic effects Long term Consumers dermal = 0,74 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 0,74 (mg/kg bw/day)
PNEC
Sweet water = 7,5 (mg/l)
Sea water = 1 (mg/l)
STP = 1000 (mg/l)

- Substance: Tetrapotassium pyrophosphate
DNEL
Systemic effects Long term Workers inhalation = 17,63 (mg/m3)
Systemic effects Long term Consumers inhalation = 10,87 (mg/m3)
Local effects Long term Workers inhalation = 2,79 (mg/m3)
PNEC
Sweet water = 0,05 (mg/l)
Sea water = 0,005 (mg/l)
STP = 50 (mg/l)

- Substance: Potassium hydroxide
DNEL
Local effects Long term Workers inhalation = 1 (mg/m3)
Local effects Long term Consumers inhalation = 1 (mg/m3)

- Substance:
Sodium etasulfate

DNEL
Systemic effects Long term Workers inhalation = 285 (mg/m3)
Systemic effects Long term Workers dermal = 4060 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 85 (mg/m3)
Systemic effects Long term Consumers dermal = 2440 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 24 (mg/kg bw/day)
PNEC
Sweet water = 0,1357 (mg/l)
sediment Sweet water = 1,5 (mg/kg/sediment)
Sea water = 0,15 (mg/l)
sediment Sea water = 0,15 (mg/kg/sediment)
STP = 1,35 (mg/l)
ground = 0,22 (mg/kg ground)

- Substance: Sodium hydroxide
DNEL
Systemic effects Short term Workers inhalation = 1 (mg/m3)
Systemic effects Short term Consumers inhalation = 1 (mg/m3)
Local effects Short term Workers inhalation = 1 (mg/m3)
Local effects Short term Consumers inhalation = 1 (mg/m3)

- Substance: Benzisothiazolinone
DNEL
Systemic effects Long term Workers inhalation = 6,81 (mg/m3)
Systemic effects Long term Workers dermal = 0,966 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 1,2 (mg/m3)
Systemic effects Long term Consumers dermal = 0,345 (mg/kg bw/day)
PNEC
Sweet water = 0,00403 (mg/l)
sediment Sweet water = 0,0499 (mg/kg/sediment)
Sea water = 0,000403 (mg/l)
sediment Sea water = 0,00499 (mg/kg/sediment)
STP = 1,03 (mg/l)
ground = 3 (mg/kg ground)

- Substance: C(M)IT/MIT (3:1)
DNEL
Systemic effects Long term Consumers oral = 0,09 (mg/kg bw/day)
Systemic effects Short term Consumers oral = 0,11 (mg/kg bw/day)
Local effects Long term Workers inhalation = 0,02 (mg/m3)
Local effects Long term Consumers inhalation = 0,02 (mg/m3)
Local effects Short term Workers inhalation = 0,04 (mg/m3)
Local effects Short term Consumers inhalation = 0,04 (mg/m3)
PNEC
Sweet water = 0,00339 (mg/l)
sediment Sweet water = 0,027 (mg/kg/sediment)
Sea water = 0,00339 (mg/l)
sediment Sea water = 0,027 (mg/kg/sediment)
STP = 0,23 (mg/l)
ground = 0,001 (mg/kg ground)

8.2. Exposure controls

Appropriate engineering controls:
Industrial Manufacturing:
No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

Manufacture of food products:
No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

8.2.2 Individual protection measures:

(a) Eye / face protection
Wear protective goggles (EN 166).

(b) Skin protection

(i) Hand protection
When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)

(ii) Other
During working operation wear protective clothing (generic workwear / antacid, safety shoes or other protective equipment) according to the instructions of the employer

(c) Respiratory protection
Not needed for normal use.
In case of insufficient ventilation or emergency, use mask with gas filters and inorganic vapors - Grey , Class 3 , B (EN 405) unless otherwise provided by the employer and / or assessments of environmental investigations hygienistic. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements (89/656/EEC, 245/2016 UE), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization

(d) Thermal hazards
No hazard to report

Environmental exposure controls:
Use according to good working practices and avoid to disperse the product into the environment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	clear liquid	
Colour	Light yellow	
Odour	not determined as it is considered not relevant for the characterization of the product	
Odour threshold	not determined as it is considered not relevant for the characterization of the product	
Melting point/freezing point	not determined as it is considered not relevant for the characterization of the product	
Boiling point or initial boiling point and boiling range	not determined as it is considered not relevant for the characterization of the product	

Physical and chemical properties	Value	Determination method
Flammability	not determined as it is considered not relevant for the characterization of the product	
Lower and upper explosion limit	not determined as it is considered not relevant for the characterization of the product	
Flash point	not determined as it is considered not relevant for the characterization of the product	
Auto-ignition temperature	not determined as it is considered not relevant for the characterization of the product	
Decomposition temperature	not determined as it is considered not relevant for the characterization of the product	
pH	13.5 ± 0.5 (20°C); 12.5 ± 0.5 (20°C; sol. 4%)	
Kinematic viscosity	not determined as it is considered not relevant for the characterization of the product	
Solubility	in water	
Water solubility	soluble in all proportions	
Partition coefficient n-octanol/water (log value)	not determined as it is considered not relevant for the characterization of the product	
Vapour pressure	not determined as it is considered not relevant for the characterization of the product	
Density and/or relative density	1,10 ± 0,05 (20°C)	
Relative vapour density	not determined as it is considered not relevant for the characterization of the product	
Particle characteristics	not determined as considered not relevant for the characterization of the product	

9.2. Other information

9.2.1 Information with regard to physical hazard classes

Irrilevant

9.2.2 Other safety characteristics

Irrilevant

SECTION 10. Stability and reactivity

10.1. Reactivity

Base

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

Exothermic reaction with strong acids.

10.4. Conditions to avoid

Avoid temperatures other than those indicated in section 7.3

10.5. Incompatible materials

It can generate flammable gases in contact with halogenated organic substances, elementary metals.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

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

(a) acute toxicity: Disodium metasilicate: Ingestion - LD50 rat (mg / kg / 24h bw): 994.7 - 1 530
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw):> 5000
Inhalation - LD50 rat (mg / l / 4h) :> 2.06
Tetrapotassium pyrophosphate: Ingestion-rat LD50 (mg/kg/bw 24h): > 2000

Skin contact-LC50 rat/coniglio (mg/kg/bw 24h): n.a.

Inhalation-rat LD50 (mg/l/4h): n.a.
Potassium hydroxide: Ingestion - LD50 rat (mg / kg / 24h bw): 333 - 388
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): nd
Inhalation - LD50 rat (mg / l / 4h): nd
Sodium etasulfate: Ingestion - LD50 rat (mg / kg / 24h bw): experimental / calculated data - 2.840 mg / kg (similar to OECD Guideline 401)
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw):> 2.000 mg / kg (OECD - guideline 402). The indications are derived from substances / products of similar composition or structure. Inhalation - LD50 rat (mg / l / 4h): nd
Sodium hydroxide: Ingestion - LD50 rat (mg / kg / 24h bw): nd
Skin contact - LC50 rabbit (mg / kg / 24h bw): 1350
Inhalation - LD50 rat (mg / l / 4h): nd
Benzisothiazolinone: Skin contact - LC50 rat / rabbit (mg / kg / 24h bw):> 2000
C(M)IT/MIT (3:1): Oral LD50 rat: 457 mg / kg bw LC50 (4 h) rat
inhalation: 1.23 mg / m³
dermal LD50 rabbit: 660 mg / kg bw
(b) skincorrosion/irritation: Corrosive product: causes severe skin burns and eye damage.
Disodium metasilicate: Corrosive
Tetrapotassium pyrophosphate: Non-corrosive
Potassium hydroxide: Corrosive
Sodium etasulfate: Non-corrosive
Sodium hydroxide: Corrosive

Benzisothiazolinone: Corrosive
C(M)IT/MIT (3:1): Corrosive
Disodium metasilicate: Irritating
Tetrapotassium pyrophosphate: Non-irritating
Potassium hydroxide: Irritating
Sodium etasulfate: Irritating
Sodium hydroxide: Irritating
Benzisothiazolinone: Irritating
C(M)IT/MIT (3:1): Irritating
(c) serious eye damage/irritation: Corrosive product: causes severe skin burns and eye damage. - If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.
Disodium metasilicate: The material causes chemical burns. It can cause permanent damage if the eye is not irrigated immediately
Tetrapotassium pyrophosphate: Non-corrosive
Potassium hydroxide: Corrosive
Sodium etasulfate: Corrosive
Sodium hydroxide: Corrosive
Benzisothiazolinone: Corrosive
C(M)IT/MIT (3:1): Corrosive
Disodium metasilicate: Irritating
Tetrapotassium pyrophosphate: Irritating
Potassium hydroxide: Irritating
Sodium etasulfate: Irritating
Sodium hydroxide: Irritating
Benzisothiazolinone: Irritating
C(M)IT/MIT (3:1): Irritating
(d) respiratoryorskinsensitisation: Disodium metasilicate: Non-sensitizing (LLNA)
Tetrapotassium pyrophosphate: Non-sensitizing
Potassium hydroxide: Not sensitizing
Sodium etasulfate: Non-sensitizing
Sodium hydroxide: Not sensitizing
Benzisothiazolinone: Sensitizing
C(M)IT/MIT (3:1): Sensitizer
TEST: Ensibilization - METHOD: OECD 406 - CAVIA: Guinea pig - RESULT: sensitizer (S171)
(e) germ cell mutagenicity: Disodium metasilicate: Not mutagenic
Tetrapotassium pyrophosphate: Non-mutagenic
Potassium hydroxide: Not mutagenic
Sodium etasulfate: Non-mutagenic
Sodium hydroxide: NaOH did not induce mutagenicity in in vitro and in vivo studies (EU RAR, 2007; section 4.1.2.7, page 73).
Benzisothiazolinone: Non-mutagenic
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class
(f) carcinogenicity: Disodium metasilicate: Not carcinogenic
Tetrapotassium pyrophosphate: Non-carcinogenic
Potassium hydroxide: Not available
Sodium etasulfate: Non-carcinogenic
Sodium hydroxide: Systemic carcinogenicity is not expected to occur as NaOH is not expected to be systemically available in the body under normal conditions of handling and use. Finally, adequate studies are not available to assess the risk on local carcinogenic effects.
Benzisothiazolinone: Not available
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class
(g) eproductivetoxicity: Disodium metasilicate: Effects on fertility: NOAEL (Rat)> 159 mg / kg bw / d. Developmental effects: NOAEL (Mouse)> 260 mg / kg bw / d.
Tetrapotassium pyrophosphate: Non-toxic for reproduction
Potassium hydroxide: Not available
Sodium etasulfate: Non-toxic for reproduction
Sodium hydroxide: NaOH is not expected to be systemically available in the body under normal conditions of handling and use and for this reason it can be said that the substance will neither reach the fetus nor reach the male and female reproductive organs (EU RAR Sodium Hydroxide (2007), section 4.1.2.8, page 73). It can be concluded that a specific

study is not required to determine reproductive toxicity.
Benzisothiazolinone: Not available
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class
(h) specific target organ toxicity (STOT) single exposure: Disodium metasilicate: Irritates respiratory systems
Tetrapotassium pyrophosphate: Not available
Potassium hydroxide: Not available
Sodium etasulfate: Not available
Sodium hydroxide: The substance can be absorbed into the body by inhalation of its aerosol, by ingestion and by contact with the skin causing corrosion
Benzisothiazolinone: Not available
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class
(i) specific target organ toxicity (STOT) repeated exposureDisodium metasilicate: NOAEL oral (rat): 227 - 237 mg / kg bw / day oral
NOAEL oral (mouse): 260 - 284 mg / kg bw / day oral
LOAEL oral (mouse): 716 - 892 mg / kg bw / day
Tetrapotassium pyrophosphate: Not available
Potassium hydroxide: Not available
Sodium etasulfate: Evaluation of toxicity following repeated administration: the product has not been tested. The indications are derived from substances / products of similar composition or structure. In tests on animals a certain adaptability has been observed following repeated exposure. The absorption of the substance by mouth in high concentrations can damage the organs.
Sodium hydroxide: The introductory sections of Annexes VII-X indicate a specific adaptation to standard information requirements as in vivo testing should be avoided with corrosive substances at concentration / dose levels causing corrosivity. However, NaOH is not expected to be systemically available in the body under normal conditions of handling and use and therefore no systemic effects of NaOH are expected after repeated exposure (EU RAR sodium hydroxide (2007); section 4.1.3.1.4, page 76).
Benzisothiazolinone: Not available
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class
(j) aspiration hazard: Disodium metasilicate: Not available
Tetrapotassium pyrophosphate: Not available
Potassium hydroxide: Not available
Sodium etasulfate: Not available
Sodium hydroxide: Not available
Benzisothiazolinone: Not available
C(M)IT/MIT (3:1): It does not meet the classification criteria for this hazard class

==========
Related to contained substances:
Potassium hydroxide:
LD50 (rat) Oral (mg/kg body weight) = 333

Benzisothiazolinone:
LD50 (rat) Oral (mg/kg body weight) = 450
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 0,21

C(M)IT/MIT (3:1):
LD50 (rat) Oral (mg/kg body weight) = 457
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 660
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 1,23

11.2. Information on other hazards

No data available.

11.2.1. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

SECTION 12. Ecological information

12.1. Toxicity

==========

Related to contained substances:
Disodium metasilicate:
Acute toxicity on fish LC50 (96 hours): 210 (Brachydanio rerio) - 2 320 (Gambusia affinis) Acute toxicity on invertebrates: EC50 (48 hours): 1700 mg / l (Daphnia magna)
Acute toxicity on Algae / Cyanobacteria: EC50 (72 h, biomass): 207 mg / L (Scenedesmus subspicatus), EC50 (72 hours, Growth inhibition): 345.4 mg / L
Chronic toxicity - NOEC fish (mg / l): nd
Chronic toxicity - crustaceans NOEC (mg / l): nd
Chronic toxicity NOEC algae (mg / l): nd
Toxicity on microorganisms: EC50 (3 h) 100 mg / L - EC0 (30 min) 1 g / L
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Tetrapotassium pyrophosphate:
Acute toxicity - fish LC50 (mg/l/96h): >100
Acute toxicity - crustaceans EC50 (mg/l/48h): >100
Acute toxicity algae ErC50 (mg/l/72-96h): na
Chronic toxicity - fish NOEC (mg/l): na
Chronic toxicity - crustaceans NOEC (mg/l): na
Chronic algae NOEC (mg/l): na
Acute toxicity - microorganisms EC50 (mg/l/3h): 1000
Acute toxicity M-factor = 1

Potassium hydroxide:
Acute toxicity - fish LC50 (mg / l / 96h): 50 - 165
Acute toxicity - crustaceans EC50 (mg / l / 48h): nd
Acute algae toxicity ErC50 (mg / l / 72-96h): nd
Chronic toxicity - NOEC fish (mg / l): nd
Chronic toxicity - crustaceans NOEC (mg / l): nd
Chronic toxicity algae NOEC (mg / l): nd
Potassium hydroxide is a strongly alkaline substance that dissociates completely in water to K + and OH- (OIDD SIDS potassium hydroxide, 2002). Therefore, the possible effective effect would result from the pH effect. However, the pH will remain between the expected environmental ranges
C(E)L50 (mg/l) = 80 Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Sodium etasulfate:
Acute toxicity-fish LC50 (mg/l/83d): > 100
Acute toxicity-crustacea EC50 (mg/l/48 h): > 100
Acute algae toxicity ErC50 (mg/l/72-69): > 100
Chronic toxicity-fish NOEC (mg/l): > 1
Chronic toxicity-crustaceans NOEC (mg/l): > 1
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Sodium hydroxide:
Acute toxicity - fish LC50 (mg / l / 96h): 45

Acute toxicity - crustaceans EC50 (mg / l / 48h): 40
Acute toxicity to algae ErC50 (mg / l / 72-96h): n.d
Chronic toxicity - fish NOEC (mg / l): n.d
Chronic toxicity - crustaceans NOEC (mg / l): n.d
Chronic toxicity to algae NOEC (mg / l): n.d

Available data indicate that NaOH concentrations of approximately 20 to 40 mg / L may be acutely toxic to fish and invertebrates (single species test). There is a lack of data on the increase in pH due to the addition of these quantities of NaOH in the test waters used. In waters with relatively low buffering capacity, NaOH concentrations of 20-40 mg / L may lead to an increase in pH with one or more pH units (EU RAR, 2007; section 3.2.1.1.3, page 30).

The OECD SIDS (2002) assigned a low reliability code ("invalid" or "not assignable") to all available tests, since in general the tests were not conducted according to current guidelines (EU RAR, 2007 ; section 3.2. 1.1.4, page 30). Furthermore, in many test reports there were no data on pH, buffer capacity and / or composition of the test medium, although this is essential information for NaOH toxicity testing. This is the most important reason why most of the tests were considered "invalid". Despite this lack of valid data, it is not necessary to perform further aquatic toxicity tests with NaOH, as all available tests have resulted in a rather small range of toxicity values (acute toxicity test: 20 to 450 mg / L; test chronic toxicity:> or = 25 mg / L) and there are sufficient data on the pH ranges tolerated by the main taxonomic groups.

Furthermore, a generic PNEC cannot be derived from the single species toxicity data for NaOH, as the pH of natural waters and the buffering capacity of natural waters show considerable differences and aquatic organisms / ecosystems are adapted to these specific natural conditions, with resulting in different pH optima and tolerated pH ranges (EU RAR, 2007; section 3.2.1.1.4, page 30). According to the OECD SIDS (2002), a lot of information is available on the relationship between pH and ecosystem structure, and natural changes in the pH of aquatic ecosystems have also been quantified and widely reported in ecological publications and manuals.
C(E)L50 (mg/l) = 45 Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Benzisothiazolinone:
Acute toxicity - fish LC50 (mg/l/96h): 2.18 Oncorhynchus mykiss - Method: OECD Test Guideline 203
Acute toxicity - crustaceans EC50 (mg/l/48h): 2.94 Daphnia magna - Test method, Directive 92/69/EEC.
Acute toxicity to algae ErC50 (mg/l/72-96h):0.11 Selenastrum capricornutum - Test type: Growth inhibitory
Chronic toxicity to fish NOEC (mg/l 28 days): 0.21 Oncorhynchus mykiss - Test type: Growth inhibitory
Chronic toxicity to crustaceans NOEC (mg/l/21d): 0.91 Daphnia magna - Test type: Reproduction test - Method: OECD Test Guideline 211
Chronic toxicity to algae NOEC (mg/l): 0.026 Pseudokirchneriella subcapitata
Toxicity to soil living organisms EC50 (mg/kg/14d): > 410.6 Eisenia fetida Method: OECD Test Guideline 207 Toxicity to soil living organisms EC50 (mg/kg/28d): 263.7 Method: OECD TG 216
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

C(M)IT/MIT (3:1):
Acute toxicity - fish LC50 (mg / l / 96h): nd
Acute toxicity - crustaceans EC50 (mg / l / 48h): 0.007 Acartia tonsa (Weideborg 1995) Acute toxicity algae ErC50 (mg / l / 72-96h): nd
Toxicity chronic - fish NOEC (mg / l): 0.098 Oncorhynchus mykiss (Scheerbaum, 1999) Chronic toxicity - crustaceans NOEC (mg / l): 0.0036 Daphnia magna (Mattock 1996)
Chronic algae toxicity NOEC (mg / l): nd
Acute toxicity M-factor = 100
Chronic toxicity M-factor = 1

Use according to good working practices and avoid to disperse the product into the environment.

12.2. Persistence and degradability

==========
Related to contained substances:
Disodium metasilicate:
Not applicable

Tetrapotassium pyrophosphate:
Not biodegradable

Potassium hydroxide:
Potassium hydroxide is not classified for the environmental compartment based on its dissociation in the environment, lack of bioacumulation and lack of adsorption of particles or surfaces.

Sodium etasulfate:
Readily biodegradable

Sodium hydroxide:
according to REACH regulation, it is not necessary to conduct the study if the substance is inorganic (Annex VII, adaptation column 2).

Benzisothiazolinone:
Not rapidly biodegradable

C(M)IT/MIT (3:1):
ACTIVATED SLUDGE TOXICITY:
EC50 / 3h: 7.92 mg / L (OECD 209)
EC50 / 3h: 0.97 mg / L (OECD 209)

BEHAVIOR IN WASTEWATER TREATMENT PLANTS:
OECD 302 B Zahn-Wellens Test: 100% (activated sludge)
OECD 303 A (Activated Sludge Units):> 80% (activated sludge)

Rapidly degradable OECD 301 D Closed Bottle Test> 60% (activated sludge) S 200 (b)

12.3. Bioaccumulative potential

==========
Related to contained substances:
Disodium metasilicate:
Toxicokinetic data on vertebrates revealed a low potential for bioaccumulation. The soluble ingested silicates are excreted through the urine and to a lesser extent through the faeces. Markedly increased rapid urinary silica excretion was observed when soluble sodium silicates were administered to rats (Benke & Osborn 1979), dogs (King et al. 1933), cats (King & McGeorge 1938) and guinea pigs (Sauer et al 1959). The half-life of urinary silicon excretion after administration of sodium silicate in rats via the gastric cannula was 24 hours (Benke & Osborn 1979).

Tetrapotassium pyrophosphate:
na

Potassium hydroxide:
Potassium hydroxide is a strong alkaline substance that completely dissociates in water to K + and OH-. Considering its high solubility in water, potassium hydroxide is not expected to be bioconcentric in organisms. Log Pow is not applicable for an inorganic compound that dissociates.

Sodium etasulfate:
Not bioaccumulative

Sodium hydroxide:

According to REACH, it is not necessary to conduct the study if the substance has a low bioaccumulation potential (Annex IX, adaptation column 2). Considering its high water solubility, NaOH should not bioconcentrate in organisms. Log Pow is not applicable for an inorganic compound that dissociates (EU RAR 2007, section 3.1.1 page 19 and section 3.1.3.4, page 26). Furthermore, sodium is an element present in nature prevalent in the environment and to which organisms are regularly exposed, for which they have a certain ability to regulate the concentration of the organism.

Benzisothiazolinone:
log KOW is 0.70 at pH 7

C(M)IT/MIT (3:1):
Information not available

12.4. Mobility in soil

==========
Related to contained substances:
Disodium metasilicate:
Due to a strong dependence on pH and concentration which leads to a dynamic polymerisation-depolymerisation equilibrium with speciation into a variety of mono-, oligo-, and polymeric anions and amorphous silica, calculations on the distribution in various environmental compartments are not feasible (HERA 2005).

Dissolved silica from commercial soluble silicates is indistinguishable from natural dissolved silica. Of the elemental composition of the earth's crust, SiO2represents about 59%. Similar percentages are obtained for many sediments and soils (Jackson 1964 as cited in HERA 2005). Silica is found in European rivers in mean concentrations of 7.5 mg SiO2/L (Jorgensen et al. 1991). Thus, silica is the second most abundant element on earth. Compounds of silicon and oxygen are ubiquitous in the environment; they are present in inorganic matter, like minerals and soils as well as in organic matter, like plants, animals and man. By weathering of soil, rocks and sediments and by atmospheric deposition, silica is released into surface and ground waters from where it may be removed by precipitation and sedimentation or taken up by living organisms, especially diatoms. Dead sedimenting diatoms also contribute significantly to sediment silica (diatomaceous earth). Silica is found in all natural waters with an average concentration of 10-20 mg SiO2/L (HERA 2005).

Due to the low vapour pressure, volatilisation is not expected.

Tetrapotassium pyrophosphate:
na

Potassium hydroxide:
According to the REACH regulation, it is not necessary to conduct the study if, based on the properties of the physical, the substance can be expected to have a low adsorption potential (Annex VIII, adaptation of column 2). Potassium hydroxide is very soluble in water and completely dissociates into K + and OH-. If emitted in surface waters, the absorption of particles and sediments will be negligible

Sodium etasulfate:
Possible absorption into the soil solid phase

Sodium hydroxide:
According to the REACH regulation, it is not necessary to conduct an adsorption / desorption study if, based on the physicochemical properties, the substance can be expected to have a low adsorption potential (Annex VIII, adaptation column 2).

Considering its high water solubility, NaOH should not bioconcentrate in organisms. The high water solubility and low vapor pressure indicate that NaOH will be found primarily in the aquatic environment.
The 73% aqueous NaOH solution at room temperature is a highly viscous gelatinous material and without additional dilution (precipitation), it is not expected to infiltrate the soil to any significant extent. The 50% aqueous NaOH solution is liquid and is expected to infiltrate the soil to a measurable extent. As a dilution of NaOH
increases, increases its speed of movement through the ground. During movement through the ground, some ion

exchange will occur.
Also, part of the hydroxide can remain in the aqueous phase and will move down through the soil in the direction of groundwater flow (EU RAR 2007, section 3.1.3, page 24).

Benzisothiazolinone:
Not available

C(M)IT/MIT (3:1):
Information not available

12.5. Results of PBT and vPvB assessment

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

12.6. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

12.7. Other adverse effects

No adverse effects

Regulation (EC) No 2006/907 - 2004/648
The (I) surfactant (s) content (s) in this preparation complies (comply) with (i) the biodegradability criteria as laid down in Regulation CE/648/2004 on detergents. All data are held at the disposal of the competent authorities of Member States and will be provided, at their direct request or at the request of a detergent manufacturer, to those authorities.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.
Recover if possible. Operate according to local or national regulations

SECTION 14. Transport information

14.1. UN number or ID number

ADR/RID/IMDG/ICAO-IATA: 3266

If subject to the following characteristics is ADR exempt:
Combination packagings: per inner packaging 1 L per package 30 kg
Inner packaging placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 1 L per package 20 kg

14.2. UN proper shipping name

ADR/RID/IMDG: LIQUIDO INORGANICO CORROSIVO, BASICO, N.A.S. (Idrossido di potassio in miscela)
ADR/RID/IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide in mixture)
ICAO-IATA: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide in mixture)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 8
ADR/RID/IMDG/ICAO-IATA: Label : 8
ADR: Tunnel restriction code : E
ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 L
IMDG - EmS : F-A, S-B

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: II

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is not environmentally hazardous
IMDG: Marine polluting agent : No

14.6. Special precautions for user

The transport must be carried out by authorized vehicles for the transport of dangerous goods in accordance with the requirements of the applicable Edition of the agreement A.D.R. and national provisions. The transport must be carried out in the original packaging and in packages that are made from materials resistant to content and not likely to generate with this dangerous reactions. The process of loading and unloading of dangerous goods have received adequate training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk is not foreseen

SECTION 15. Regulatory information

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

Restrictions relating to the product or the substances contained (Annex XVII EC Reg. 1907/2006): not applicable
Substances in Candidate list (art. 59 EC Reg. 1907/2006): the product does not contain SVHC in percentage = a 0.1 %.

Regulation (EC) 648/04: see point 2.2
Regulation (EU) 528/2012: see point 2.2
Regulation (EU) 1169/2011: see point 2.2
Regulation (EU) 1308/2013; see point 2.2
Regulation (EC) 1333/2008; see point 2.2
Regulation (EC) 1332/2008; see point 2.2
REGULATION (EU) No 1357/2014 - waste:
HP8 - Corrosive

15.2. Chemical safety assessment

Chemical safety assessments were carried out for the following substances:

Disodium metasilicate
Tetrapotassium pyrophosphate
Potassium hydroxide
Sodium ethasulfate
Benzisothiazolinone

SECTION 16. Other information

16.1. Other information

Points modified compared to previous release: 1.1. Product identifier, 2.2. Label elements, 2.3. Other hazards, 7.1. Precautions for safe handling, 8.2. Exposure controls, 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008, 12.1. Toxicity, 12.2. Persistence and degradability, 12.3. Bioaccumulative potential, 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture, 15.2. Chemical safety assessment

Description of hazard statements set out in paragraph 3
H290 = May be corrosive to metals.
H314 = Causes severe skin burns and eye damage.
H318 = Causes serious eye damage.
H335 = May cause respiratory irritation.
H319 = Causes serious eye irritation.
H302 = Harmful if swallowed.
H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H330 = Fatal if inhaled.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H301 = Toxic if swallowed.
H310 = Fatal in contact with skin.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008: Calculation method

Main normative references:
Reg. (CE) n. 1907 del 18/12/06 REACH (Registration, Evaluation and Authorisation of CHemicals) et seq.
Reg. (CE) 1272/2008 CLP (Classification Labelling and Packaging) et seq.
Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

Training required: This document must be submitted to the employer to determine the possible need for appropriate training for workers to ensure protection of human health and the environment.

n.a.: not applicable
n.d.: not available
ADR: Accord europèen relative au transport International des merchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE: Acute Toxicity Estimat
BFC: BioconCentration Factor
BOD: Biochemical Oxigen Demand
CAS: Chemical Abstract Service number
CAP: Centre AntiPoison
CE/EC number EINECS (European Inventory of existing Commercial Substances) e ELINCS (European List of notified

Chemical Substances)
CL50/LC50: Lethal Concentration 50
DL50/LD50: Lethal Dose 50
COD: Chemical Oxygen Demand
DNEL: Derived No Effect Level
EC50: half maximal Effective Concentration
ERC: Enviroment Release Classes
EU/UE: European Union
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods code
Kow: Octanol water partition coefficient
NOEC: No Observed Effect Concentration
OEL: Occupational Exposure Limit
PBT: Persistent Bioaccumulative and Toxic
PC: Product Categories
PNEC: Predicted No Effect Concentration
PROC: Process Categories
RID: Règlement concernent le transport International ferroviaire des merchandises dangereuses (Regulations concerning International rail transport of dangerous goods)
STOT: Target Organ Systemic Toxicity
STOT (RE): Repeated Exposure
STOT (SE): Single Exposure
STP: Sewage Treatment Plants
SU: Sector of Use
SVCH: Substance of Very High Concern
TLV: Threshold Limit Value
vPvB: Very Persistent Very Bioaccumulative

References and Sources:
- ECHA Registered Substances:
https://echa.europa.eu/web/guest/information-on-chemicals/registered-substances

- SDS raw material supplier

- GESTIS International Limit Value: http://limitvalue.ifa.dguv.de

This msds was made in good faith by technical Office on the basis of the information available at the date of the last revision. The person in charge must regularly inform the employees about the specific risks they encounter when using this substance/product. The information contained here relate only to the substance/the preparation indicated and may not apply if the product is used improperly or in combination with others. Nothing contained herein shall be construed as a guarantee, either express or implied. It is the responsibility of the user to ensure the opportunities and completeness of the information contained herein for their own particular use.

*** this tab annuls and replaces any previous edition. (IIXX)

Changes to the previous edition: documental updating

SUMI

Safe Use of Mixtures Information

AISE_SUMI_IS_8b_1

Version 1.1, August 2018

Transfer and dilution of concentrated product by using dedicated dosing system

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

This SUMI applies to industrial uses where products are transferred to or diluted in a dedicated dosing system. This Safe Use Information is based on the **AISE_SWED_IS_8b_1_L** and **AISE_SWED_IS_8b_1_S**

Operational Conditions

Maximum duration	60 minutes per day.
Range of application / Process conditions	Indoor Use.
	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per hour). No LEV required.

Risk Management Measures

Measures related to personal protective equipment (PPE), hygiene and health evaluation	Wear suitable gloves. See section 8 of the SDS of this product for specifications. 
	Training of workers in relation to proper use and maintenance of PPEs must be ensured.
Environmental measures	Prevent that undiluted product reaches surface waters.
	If appropriate AISE SPERC 8a.1.a.v2 may apply: wide dispersive use resulting in release to municipal sewage treatment plant.

Additional good practice advice

Don't eat or drink. **Don't smoke.** **Don't use in proximity of open flame.**	
Wash hands after use. **Avoid contact with damaged skin.** **Do not mix with other products.**	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

SUMI

Safe Use of Mixtures Information

AISE_SUMI_IS_4_2

Version 1.1, August 2018

Industrial uses; Automated task; Semi-automated task; Dedicated equipment

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

The SUMI applies to industrial uses where products are used in closed process where opportunity for exposure arises. This Safe Use Information is based on the **AISE_SWED_IS_4_2**.

Operational Conditions

Maximum duration	480 minutes per day.
Range of application / Process conditions	Indoor Use.
	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per hour). No LEV required.

Risk Management Measures

Measures related to personal protective equipment (PPE), hygiene and health evaluation	Wear suitable gloves. See section 8 of the SDS of this product for specifications. 
	Training of workers in relation to proper use and maintenance of PPEs must be ensured.
Environmental measures	Prevent that undiluted product reaches surface waters.
	If appropriate AISE SPERC 8a.1.a.v2 may apply: wide dispersive use resulting in release to municipal sewage treatment plant.

Additional good practice advice

Don't eat or drink. **Don't smoke.** **Don't use in proximity of open flame.**	
Wash hands after use. **Avoid contact with damaged skin.** **Do not mix with other products.**	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

Disclaimer

This is a document for communicating generic conditions of safe use of a product. It is the responsibility of the formulator to link this SUMI to the SDS of a specific product that he is selling.
If a SUMI (or associated SWED) code is mentioned in the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the SUMI is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier for an ingredient that contributes to the classification of the mixture, the formulator has performed a safety assessment himself.
Following Occupational Health legislation, the employer of workers that use products that are assessed as safe following SUMI conditions remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product.
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SUMI

Safe Use of Mixtures Information

AISE_SUMI_IS_13_3_G

Version 1.1, August 2018

Industrial uses; Treatment of articles by dipping or pouring

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

This SUMI applies to industrial uses where articles are treated by dipping or pouring. This Safe Use Information is based on the **AISE_SWED_IS_13_3**.

Operational Conditions

Maximum duration	480 minutes per day.
Range of application / Process conditions	Indoor Use.
	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per hour). No LEV required.

Risk Management Measures

Measures related to personal protective equipment (PPE), hygiene and health evaluation	Wear suitable gloves and eye protection. See section 8 of the SDS of this product for specifications. 
	Training of workers in relation to proper use and maintenance of PPEs must be ensured.
Environmental measures	Prevent that undiluted product reaches surface waters.
	If appropriate AISE SPERC 8a.1.a.v2 may apply: wide dispersive use resulting in release to municipal sewage treatment plant.

Additional good practice advice

Don't eat or drink. **Don't smoke.** **Don't use in proximity of open flame.**	
Wash hands after use. **Avoid contact with damaged skin.** **Do not mix with other products.**	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

WORKING ISTRUCTION TABLE

IMPROVEMENT THROUGH BIOTECHNOLOGY

This tab provides instructions for appropriate and safe use of products and proper management of emergency situations for cleaning staff/users.

Attached to MSDS Rel#11 06/25/2025

Use description	Transfer of substance or preparation (charging / discharging) from/to containers at dedicated facilities[PROC8B]; Use in batch and other process (syn- thesis) where opportunity for exposure arises [PROC4] Treatment of articles by dipping and pouring [PROC13]
Product name	**DOMAL**
Classification of the product (100%)	H314- Causes severe skin burns and eye damage H318 - Causes serious eye damage H290 - May be corrosive to metals EUH208 Contains preservatives: Benzisothiazolinone. May produce an allergic reaction.
Classification of the diluted product (maximum use concentration)	At maximux concentration of use (4%) the product is classified: H290 - May be corrosive to metals H314- Causes severe skin burns and eye damage H318 - Causes serious eye damage
Handling of the product (100%)	Avoid contact and inhalation of vapors Wear protective gloves/protective clothing/eye protection/face protection. At work do not eat or drink.
Handling of the diluted product	Avoid contact and inhalation of vapors At work do not eat or drink.
DPI required concentrated product (racking, concentrated use, spillage…)	Chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3), safety glasses (EN 166).
Diluited product	Chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3), safety glasses (EN 166).
In case of emergency (accidents involving exposure to the product)	Immediately inform the customer. Immediately inform the employer. Contact Poisons Centres tel. number in 1.4 section of the MSDS
Accidental release large quantities measures: concentrated product	Wear gloves, mask and protective clothing (for specifications refer to section 8.2. SDS) Possibly absorb it with inert materia or sucked it. After wiping up, wash with water the area and materials involved

Diluited product	Wear gloves, mask and protective clothing. Wash with water the area and materials involved
Storage of the product	Keep in original container closed tightly. Do not store in open or unlabelled containers. Keep containers upright and safe by avoiding the possibility of falls or collisions. Store in a cool and dry place, away from heat sources and direct exposure to sunlight.
In case of accidents, emergency or fire	Immediately inform the customer. Follow company emergency instruction.