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

· 1.1 Product identifier

· Trade name: ACTISTRONG

· Article number: c.p. 386

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

· Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

- · Product category PC35 Washing and cleaning products (including solvent based products)
- · Application of the substance / the mixture Surface cleanser
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

LINDHAUS SRL

Via Belgio, 22 Z.I. - 35127 Padova - Italy

Tel. +39 049 8700307 - Fax +39 049 8700605

www.lindhaus.it - vacuum@lindhaus.it

- · Further information obtainable from: vacuum@lindhaus.it
- · 1.4 Emergency telephone number: LINDHAUS SRL Tel. +39 049 8700307

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

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



C; Corrosive

R34: Causes burns.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS05

- · Signal word Danger
- · Hazard-determining components of labelling:

sodium hydroxide

Sulfuric acid, mono-C8-10-alkyl ester, sodium salts

Alcohol ethoxylate

· Hazard statements

H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

(Contd. of page 1)

· Precautionary statements

P102 Keep out of reach of children.

Wear protective gloves / eye protection. P280

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

| Dangerous components: | | |
|---|---|---------|
| CAS: 112-34-5 EINECS: 203-961-6 Index number: 603-096-00-8 Reg.nr.: 01-2119475104-44-xxxx | 2-(2-butoxyethoxy)ethanol Xi R36 Eye Irrit. 2, H319 | 2.5-109 |
| CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6 Reg.nr.: 01-2119457892-27-xxxx | sodium hydroxide C R35 Skin Corr. 1A, H314 | ≤ 2.5% |
| CAS: 85338-42-7 EINECS: 286-718-7 Reg.nr.: 01-2119972287-26-0000 | Sulfuric acid, mono-C8-10-alkyl ester, sodium salts Xn R22; Xi R38-41 ♦ Eye Dam. 1, H318; ♦ Acute Tox. 4, H302; Skin Irrit. 2, H315 | ≤ 2.5% |
| CAS: 61789-30-8 EINECS: 263-049-9 | Fatty acids, coco, potassium salts Xi R36/38 ♦ Skin Irrit. 2, H315; Eye Irrit. 2, H319 | ≤ 2.5% |
| CAS: 68439-46-3 | Alcohol ethoxylate Xn R22; X Xi R41 Eye Dam. 1, H318; Acute Tox. 4, H302 | ≤ 2.5% |

| · Regulation (EC) No 648/2004 on detergents / Labelling for contents | |
|--|------|
| anionic surfactants, soap, non-ionic surfactants, phosphonates | < 5% |

· Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

Trade name: ACTISTRONG

(Contd. of page 2)

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling Keep receptacles tightly sealed.
- · Information about fire and explosion protection: The product is not flammable.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage.
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Do not store together with acids.
- · Further information about storage conditions: Keep container tightly sealed.
- \cdot 7.3 *Specific end use(s) No further relevant information available.*

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

| · 8.1 Contro | ol parameters |
|----------------|--|
| · Ingredien | ts with limit values that require monitoring at the workplace: |
| 112-34-5 | 2-(2-butoxyethoxy)ethanol |
| WEL Sho Lon | rt-term value: 101.2 mg/m³, 15 ppm g-term value: 67.5 mg/m³, 10 ppm |
| 1310-73-2 | 2 sodium hydroxide |
| WEL Sho | rt-term value: 2 mg/m³ |
| · DNELs | |
| 112-34-5 | 2-(2-butoxyethoxy)ethanol |
| Oral | Long term, systemic effects 1.25 mg/kg (general population) |
| Dermal | Long term, systemic effects 10 mg/kg (general population) |

20 mg/kg (professional workers)

(Contd. on page 4)

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

| | | | (Contd. of pag |
|------------|------------------------------|------------------------------------|----------------|
| Inhalative | Long term, local effects | 34 mg/m3 (general population) | , , |
| | | 67.5 mg/m3 (professional workers) | |
| | Long term, systemic effects | 34 mg/m3 (general population) | |
| | | 67.5 mg/m3 (professional workers) | |
| | Short term, local effects | 50.6 mg/m3 (general population) | |
| | | 101.2 mg/m3 (professional workers) | |
| 1310-73-2 | sodium hydroxide | | |
| Inhalative | Long term, local effects | 1 mg/m3 (general population) | |
| | | 1 mg/m3 (professional workers) | |
| PNECs | | | |
| 112-34-5 2 | 2-(2-butoxyethoxy)ethanol | | |
| PNEC 1 n | ng/l (freshwater) | | |
| 4 n | ng/kg (fresh water sediments |) | |
| 3.9 | mg/l (intermittent releases) | | |
| | mg/l (marine water) | | |
| 0.4 | mg/kg (marine water sedim | ents) | |
| | | | |
| 0.4 | mg/kg (soil) | | |

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not necessary if room is well-ventilated.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

(Contd. of page 4)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid
Colour: Colourless
Odour: Odourless
Odour threshold: Not determined.

· pH-value at 20 °C:

· Change in condition

Melting point/Melting range:Undetermined.Boiling point/Boiling range:> 100 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: Product is not selfigniting.

· Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

12.0 - 13.0

· Explosion limits:

Lower:Not determined.Upper:Not determined.

· Vapour pressure: Not determined.

Density at 20 °C:
 Relative density
 Vapour density
 Evaporation rate
 1.010 - 1.050 g/cm³
 Not determined.
 Not determined.
 Not determined.

· Solubility in / Miscibility with

water: Soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined.
Kinematic: Not determined.

· Solvent content:

VOC (EC) 7.0 - 9.0 %

• 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

(Contd. on page 6)

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

(Contd. of page 5)

- · 10.3 Possibility of hazardous reactions Reacts with acids.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:

| incure to | accity. | |
|-----------|---------|---------------------------------|
| · LD/LC5 | 0 valu | es relevant for classification: |
| 112-34- | 5 2-(2- | butoxyethoxy)ethanol |
| Oral | LD50 | 5660 mg/kg (rat) |
| Dermal | LD50 | 4000 mg/kg (rabbit) |
| | | um hydroxide |
| Oral | LD50 | 1350 mg/kg (rat) |
| Dermal | LD50 | 1350 mg/kg (rat) |

- · Primary irritant effect:
- · on the skin: Strong caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitisation: No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

112-34-5 2-(2-butoxyethoxy)ethanol

EC50 1170 mg/kg (daphnia)

1310-73-2 sodium hydroxide

EC50 40.4 mg/kg (daphnia)

· 12.2 Persistence and degradability

The surfactants contained in the product correspond to the legislation on the environmental compatibility of detergents and are biodegradable.

- · 12.3 Bioaccumulative potential Not worth-mentioning accumulating in organisms
- · 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Must not reach sewage water or drainage ditch undiluted or unneutralised.

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

GB

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

(Contd. of page 6)

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agents: Water, if necessary together with cleansing agents.

| SECTION 14: Transport informat | |
|--|---|
| 14.1 UN-Number | XXXX02.4 |
| ADR, IMDG, IATA | UN1824 |
| 14.2 UN proper shipping name | |
| ADR | 1824 SODIUM HYDROXIDE SOLUTION mixture |
| IMDG, IATA | SODIUM HYDROXIDE SOLUTION mixture |
| 14.3 Transport hazard class(es) | |
| ADR, IMDG, IATA | |
| | |
| <u> </u> | |
| | |
| • | |
| Class | 8 Corrosive substances. |
| Label | 8 |
| 14.4 Packing group | |
| ADR, IMDG, IATA | III |
| 14.5 Environmental hazards: | |
| Marine pollutant: | No |
| 14.6 Special precautions for user | Warning: Corrosive substances. |
| Danger code (Kemler): | 80 |
| EMS Number: | F- A , S - B |
| Segregation groups | Alkalis |
| 14.7 Transport in bulk according to Anne | ex II of |
| MARPOL73/78 and the IBC Code | Not applicable. |
| Transport/Additional information: | |
| ADR | |
| Limited quantities (LQ) | 5L |
| Excepted quantities (\widetilde{EQ}) | Code: E1 |
| <u>-</u> | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| Transport category | 3 |
| Tunnel restriction code | E |
| MDG | |
| Limited quantities (LQ) | <i>5L</i> |
| Excepted quantities (EQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |

Printing date 08.04.2015 Version number 5 Revision: 08.04.2015

Trade name: ACTISTRONG

(Contd. of page 7)

· UN "Model Regulation":

 $UN1824,\,SODIUM\,HYDROXIDE\,SOLUTION\,mixture,\,8,$

III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- R22 Harmful if swallowed.
- R35 Causes severe burns.
- R36 Irritating to eyes.
- R36/38 Irritating to eyes and skin.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

* Data compared to the previous version altered.