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Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2013

Reviewed on 05/29/2013

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

- · Product identifier
- · Trade name: Alpacon Descalant
- · Article number: 1796404-13, 1796404-15, 1796404-19, 585828-01
- Application of the substance / the preparation Industrial cleaning agent for removal of lime and rust deposits
- · Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Alfa Laval Tumba AB Hans Stahles väg 7 S-147 80 TUMBA SWEDEN sds.question@alfalaval.com
- · Information department: sds.question@alfalaval.com
- Emergency telephone number: U.S. emergency number: 911

2 Hazards identification

- · Classification of the substance or mixture
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
 Irritant

Irritating to eyes.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of international guidelines.

- Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- · Label elements
- · Labelling according to EU guidelines:

The product has been marked in accordance with national laws.

· Code letter and hazard designation of product:



- **Risk phrases:** Irritating to eyes.
- Safety phrases: Avoid contact with eyes.

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⁻ USA -



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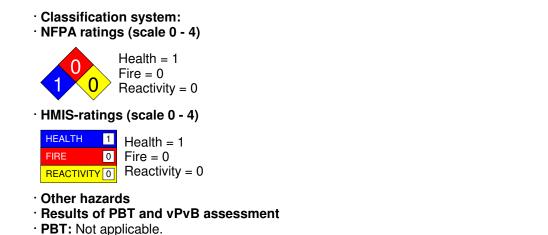
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Trade name: Alpacon Descalant



• vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description:

Mixture of the substances listed below with nonhazardous additions.

92129-93-6 Bio Gen Active

· Dangerous components:

77-92-9 citric acid

4 First aid measures

- · Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · 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:

Induce vomiting and call for medical help.

Rinse out mouth and then drink plenty of water.

- Most important symptoms and effects, both acute and delayed No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

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LISA

10-25%

25-50%



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5 Firefighting measures

- · Extinguishing media
- Suitable extinguishing agents:

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

- Special hazards arising from the substance or mixture No further relevant information available. • Advice for firefighters
- · Protective equipment: Wear self-contained respiatory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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.

7 Handling and storage

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace. Avoid contact with eyes.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Do not store together with alkalis (caustic solutions).
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

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(Contd. of page 3) Control parameters Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. • Additional information: The lists that were valid during the creation were used as basis. · Exposure controls · Personal protective equipment: · General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. · Breathing equipment: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. · Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. · Material of gloves Nitrile rubber, NBR Natural rubber, NR Recommended thickness of the material: $\geq 0.1 \text{ mm}$ · Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. • Eye protection: Tightly sealed goggles

| • | |
|-----------------|---------------------------|
| Light yellow | |
| Acidic | |
| Not determined. | |
| ~1.3 | |
| | Acidic Not determined. |



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Trade name: Alpacon Descalant

| | (Contd. of page |
|---|---|
| Change in condition Melting point/Melting range: Boiling point/Boiling range: | Undetermined. 100 ℃ (212 ℉) |
| · Flash point: | Not applicable. |
| · Flammability (solid, gaseous): | Not applicable. |
| · Ignition temperature: | |
| Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| Explosion limits: Lower: Upper: | Not determined. Not determined. |
| · Vapor pressure: | Not determined. |
| · Density at 20 ℃ (68 ℉): · Relative density · Vapour density · Evaporation rate | ~1.15 g/cm ³ (~9.597 lbs/gal) Not determined. Not determined. Not determined. |
| Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/wat | t er): Not determined. |
| Viscosity: Dynamic: Kinematic: Other information | Not determined. Not determined. No further relevant information available. |

10 Stability and reactivity

· Reactivity

• Chemical stability Stable under normal temperature conditions and recommended use • Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid Do not store together with alkalis (caustic solutions).

· Hazardous decomposition products: No dangerous decomposition products known.

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11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

77-92-9 citric acid

Oral LD50 5040 mg/kg (mouse)

· Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- on the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: No sensitizing effects known.

• Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information

Toxicity

92129-93-6 Bio Gen Active

- EC50 >300 mg/L (Algae) ((72h))
- LC50 >300 mg/L (daphnia) ((48h))
 - >1000 mg/L (Fish) ((96h))
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability Easily biodegradable
- · Bioaccumulative potential Does not accumulate in organisms
- · Mobility in soil Some mobility in soil can be expected
- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

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· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly. Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Diluted caustic solution

| Transport information | |
|--|----------------------------|
| · UN-Number · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA · Class | Void |
| · Packing group · DOT, ADR, IMDG, IATA | Void |
| Environmental hazards: Marine pollutant: | No |
| Special precautions for user | Not applicable. |
| Transport in bulk according to Anne MARPOL73/78 and the IBC Code | x II of Not applicable. |

15 Regulatory information

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

- EU Regulation (EC) no.1907/2006 (REACH) EU regulation (EC) no 1272/2008 (CLP)
- EC DIRECTIVE 2008/98/EC (waste) 99/45/EC

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· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2013

Reviewed on 05/29/2013

Trade name: Alpacon Descalant

(Contd. of page 8)

16 Other information

LIMITATION OF LIABILITY

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.

 Department issuing MSDS: MACC -Materials & Chemistry Centre Christine Diedrich Linda Kraft
 * Data compared to the previous version altered.

USA