

**NOVADAN®****SAFETY DATA SHEET**  
**Ro Dan 144****NOVADAN®**

SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II-EU

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

Date issued 08.03.2012

Revision date 24.07.2014

**1.1. Product identifier**

Product name Ro Dan 144

Article no. 12850, 12851, 12852, 59230, 59231

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

Product group Alkaline cleaner/detergent for membranes.

Relevant identified uses  
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites  
SU4 Manufacture of food products  
PC35 Washing and cleaning products (including solvent based products)  
PROC2 Use in closed, continuous process with occasional controlled exposure  
ERC9A Wide dispersive indoor use of substances in closed systems

Uses advised against No specific uses advised against are identified.

**1.3. Details of the supplier of the safety data sheet**

Company name Novadan ApS  
Postal address Platinvej 21  
Postcode DK-6000  
City Kolding  
Country Danmark  
Tel + 45 76 34 84 00  
Fax + 45 75 50 43 70  
E-mail sds@novadan.dk  
Website <http://www.novadan.dk>

**1.4. Emergency telephone number**

Emergency telephone National Poisons Information Service:844 892 0111

**SECTION 2: Hazards identification****2.1. Classification of substance or mixture**

Classification according to C; R35  
67/548/EEC or 1999/45/EC

Classification according to Skin Corr 1A;H314;  
Regulation (EC) No 1272/2008  
[CLP/GHS]

Substance / mixture hazardous properties For further information, please refer to section 11.

**2.2. Label elements**

## Hazard Pictograms (CLP)



|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Composition on the label | Sodium hydroxide: 5 - 15 %                                                                                                                                                                                                                                                                                                                                                                                                            |
| Signal word              | Danger                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Hazard statements        | H314 Causes severe skin burns and eye damage.                                                                                                                                                                                                                                                                                                                                                                                         |
| Precautionary statements | P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 Immediately call a POISON CENTER or doctor/physician. |

### 2.3. Other hazards

|                       |                                                                                                                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health effect         | Corrosive to skin and eyes. May cause permanent damage to the eyes, especially if the product is not washed away IMMEDIATELY. See section 11 for additional information on health hazards.                     |
| Environmental effects | Substantial amounts of the product may lead to a local change in acidity in small water systems which may have adverse effects on aquatic organisms. This product does not contain any PBT or vPvB substances. |

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

| Substance                                           | Identification                                                                                                                                             | Classification                                                                           | Contents |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------|
| Sodium hydroxide                                    | CAS no.: 1310-73-2<br>EC no.: 215-185-5<br>Index no.: 011-002-00-6<br>Registration number: 01-2119457892-27-XXXX<br>Synonyms: Sodium hydroxide             | C; R35<br>Skin Corr. 1A; H314                                                            | 5 - 15 % |
| Tetrasodium-EDTA                                    | CAS no.: 64-02-8<br>EC no.: 200-573-9<br>Index no.: 607-428-00-2<br>Registration number: 01-2119486762-XXXX                                                | Xi; R41<br>Xn; R20/22<br>Eye Dam. 1; H318;<br>Acute tox. 4; H332;<br>Acute tox. 4; H302; | 5 - 15 % |
| Benzenesulfonic acid, dodecyl-, sodium salt         | CAS no.: 25155-30-0<br>EC no.: 246-680-4                                                                                                                   | Xn; R22,R37/38,R41                                                                       | 1 - 5 %  |
| Sodium carbonate                                    | CAS no.: 497-19-8<br>EC no.: 207-838-8<br>Index no.: 011-005-00-2<br>Registration number: 01-211-9485498-19                                                | Xi; R36<br>Eye Irrit. 2; H319;                                                           | 1 - 5 %  |
| Benzenesulfonic acid, (1-methylethyl)-, sodium salt | CAS no.: 28348-53-0<br>EC no.: 248-983-7                                                                                                                   | Xi; R36                                                                                  | 1 - 5 %  |
| Sodiumcapryliminodipropionate                       | CAS no.: 94441-92-6<br>EC no.: 305-318-6                                                                                                                   | Xi; R41<br>Eye Dam. 1; H318;                                                             | 1 - 5 %  |
| Substance comments                                  | 5-15%: tetrasodium-EDTA , anionic surfactant ,<br><5%: phosphonate .<br>The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16. |                                                                                          |          |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                                                    |                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General                                                            | Remove affected person from source of contamination.                                                                                                                                                                                                                                                       |
| Inhalation                                                         | Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.                                                                                                                                                                   |
| Skin contact                                                       | Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if any discomfort continues.                                                                                                                         |
| Eye contact                                                        | Important! Immediately rinse with water for at least 15 minutes. May cause permanent damage if eye is not immediately irrigated. Make sure to remove any contact lenses from the eyes before rinsing. Immediately transport to hospital or eye specialist. Continue flushing during transport to hospital. |
| Ingestion                                                          | Immediately rinse mouth and drink plenty of water. Call an ambulance. Bring along these instructions. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Do not give victim anything to drink if he is unconscious.                    |
| Recommended personal protective equipment for first aid responders | Wear necessary protective equipment. For personal protection, see section 8.                                                                                                                                                                                                                               |

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

|                              |                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------|
| Acute symptoms and effects   | As described in section 2.2 and 2.3.                                              |
| Delayed symptoms and effects | The etching penetrates deeply into the tissue and is first noticed after a while. |

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

|                   |                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------|
| Other Information | In case of unconsciousness, ingestion or eye contact: Immediately call a doctor / ambulance. Show this safety data sheet. |
|-------------------|---------------------------------------------------------------------------------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                              |                                                                     |
|------------------------------|---------------------------------------------------------------------|
| Suitable extinguishing media | Use fire-extinguishing media appropriate for surrounding materials. |
|------------------------------|---------------------------------------------------------------------|

### 5.2. Special hazards arising from the substance or mixture

|                            |                                                                                                                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire and explosion hazards | This product is not flammable. During fire, gases hazardous to health may be formed. Water used for fire extinguishing, which has been in contact with the product, may be corrosive. |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 5.3. Advice for firefighters

|                               |                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal protective equipment | Wear necessary protective equipment. For personal protection, see section 8.                                                                      |
| Fire fighting procedures      | Reference is made to the company fire procedure. If risk of water pollution occurs, notify appropriate authorities. Avoid breathing fire vapours. |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                              |                                                                                                                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal protection measures | Look out! The product is corrosive. Use protective gloves, goggles and suitable protective clothing. In case of inadequate ventilation, use respiratory protection. For personal protection, see section 8. |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 6.2. Environmental precautions

|                                      |                                                                                                                                    |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Environmental precautionary measures | Avoid discharge into water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment. |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

### 6.3. Methods and material for containment and cleaning up

|                 |                                                                                                   |
|-----------------|---------------------------------------------------------------------------------------------------|
| Cleaning method | Dam and absorb spillage with sand, sawdust or other absorbent. Wash contaminated area with water. |
|-----------------|---------------------------------------------------------------------------------------------------|

## 6.4. Reference to other sections

Other instructions See section 8 and section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handling Avoid spilling, skin and eye contact. Use work methods which minimize spreading of vapours, dust, smoke, aerosols, splashes etc. to the extent technically possible. Do not mix with acidic products.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage Store in tightly closed original container. Keep away from food, drink and animal feeding stuffs.  
Store above freezing.  
Store protected from acids.

### Conditions for safe storage

Storage Temperature Value: 0-35 °C.  
Storage Stability Durability: 36 months.

### 7.3. Specific end use(s)

Specific use(s) The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure limit values

| Substance        | Identification                                                                                                                                 | Value                        | TWA Year |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|
| Sodium hydroxide | CAS no.: 1310-73-2<br>EC no.: 215-185-5<br>Index no.: 011-002-00-6<br>Registration number: 01-2119457892-27-XXXX<br>Synonyms: Sodium hydroxide | 15 min.: 2 mg/m <sup>3</sup> | 2011     |
| Tetrasodium-EDTA | CAS no.: 64-02-8<br>EC no.: 200-573-9<br>Index no.: 607-428-00-2<br>Registration number: 01-2119486762-XXXX                                    |                              |          |
| Sodium carbonate | CAS no.: 497-19-8<br>EC no.: 207-838-8<br>Index no.: 011-005-00-2<br>Registration number: 01-211-9485498-19                                    |                              |          |

Substance Sodium carbonate  
Summary of risk management measures, environment, for the substance Data lacking.

### DNEL / PNEC from substances

Substance Sodium hydroxide  
DNEL Group: Consumer  
Exposure route: Inhalation  
Exposure frequency: Long term (repeated)  
Type of effect: Local effect  
Value: 1 mg/m<sup>3</sup>  
Remarks: ECHA

|           |                                                                                                                                                                        |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Type of effect: Local effect<br>Value: 1 mg/m <sup>3</sup><br>Remarks: ECHA |
| Substance | Tetrasodium-EDTA                                                                                                                                                       |
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Type of effect: Local effect<br>Value: 2,5 mg/m <sup>3</sup>                |
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Type of effect: Systemic effect<br>Value: 2,5 mg/m <sup>3</sup>             |
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Short term (acute)<br>Type of effect: Local effect<br>Value: 2,5 mg/m <sup>3</sup>                  |
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Short term (acute)<br>Type of effect: Systemic effect<br>Value: 2,5 mg/m <sup>3</sup>               |
| DNEL      | Group: Consumer<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Type of effect: Local effect<br>Value: 1,5 mg/m <sup>3</sup>              |
| DNEL      | Group: Consumer<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Type of effect: Systemic effect<br>Value: 1,5 mg/m <sup>3</sup>           |
| DNEL      | Group: Consumer<br>Exposure route: Inhalation<br>Exposure frequency: Short term (acute)<br>Type of effect: Local effect<br>Value: 1,5 mg/m <sup>3</sup>                |
| DNEL      | Group: Consumer<br>Exposure route: Inhalation<br>Exposure frequency: Short term (acute)<br>Type of effect: Systemic effect<br>Value: 1,5 mg/m <sup>3</sup>             |
| DNEL      | Group: Consumer<br>Exposure route: Oral<br>Exposure frequency: Long term (repeated)<br>Type of effect: Systemic effect<br>Value: 25 mg/kg body weight/day              |
| PNEC      | Exposure route: Air<br>Value: 1,2 mg/l                                                                                                                                 |
| PNEC      | Exposure route: Sewage treatment plant STP                                                                                                                             |

|           |                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Value: 43 mg/l                                                                                                                                   |
| PNEC      | Exposure route: Soil<br>Value: 0,72 mg/kg                                                                                                        |
| PNEC      | Exposure route: Water<br>Value: 2,2 mg/l                                                                                                         |
| Substance | Sodium carbonate                                                                                                                                 |
| DNEL      | Group: Worker<br>Exposure route: Inhalation<br>Exposure frequency: Long term (repeated)<br>Value: 10 mg/m <sup>3</sup><br>Remarks: Supplier MSDS |

## 8.2. Exposure controls

|                                     |                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended monitoring procedures   | Not known.                                                                                                                                                                                                     |
| Limitation of exposure on workplace | Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. An eye wash bottle must be available at the work site. |

## Safety signs



## Respiratory protection

|                        |                                                                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Respiratory protection | Under normal conditions of use respiration protection should not be required.<br>In case of inadequate ventilation: Use respiratory equipment with particle filter, type P2. |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Hand protection

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hand protection   | Use protective gloves made of: Butyl rubber. Neoprene. Nitrile.                                                                                                                                                                                                                                                                                                                                                                                                                |
| Breakthrough time | Breakthrough time for nitrile rubber, neoprene and butyl rubber is approx. 3 hours.<br>The recommendation is a qualified estimate based on knowledge of the components. Elastic gloves stretch when used as glove thickness and thus the breakthrough time reduced.<br>The EN 374-3 standard test is performed at 23°C, but the practical temperature of the glove is approx. 35°C.<br>The breakthrough time of the different glove guides, is therefor reduced by a factor 3. |

## Eye / face protection

|                |                     |
|----------------|---------------------|
| Eye protection | Use eye protection. |
|----------------|---------------------|

## Skin protection

|                                |                                                                             |
|--------------------------------|-----------------------------------------------------------------------------|
| Skin protection (except hands) | Wear apron or protective clothing in case of contact. Wear rubber footwear. |
|--------------------------------|-----------------------------------------------------------------------------|

## Thermal hazards

|                 |                |
|-----------------|----------------|
| Thermal hazards | See section 5. |
|-----------------|----------------|

## Appropriate environmental exposure control

|                                 |                |
|---------------------------------|----------------|
| Environmental exposure controls | See section 6. |
|---------------------------------|----------------|

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                  |                            |
|------------------|----------------------------|
| Physical state   | Fluid.                     |
| Colour           | Colourless to pale yellow. |
| pH (as supplied) | Value: > 13,0              |

|                                 |                              |
|---------------------------------|------------------------------|
| pH (aqueous solution)           | Value: ~ 12,0                |
| Comments, pH (aqueous solution) | 1%                           |
| Bulk density                    | Value: ~ 1,25 kg/l.          |
| Solubility description          | Completely soluble in water. |

## 9.2. Other information

### Other physical and chemical properties

|          |                   |
|----------|-------------------|
| Comments | No data recorded. |
|----------|-------------------|

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| Reactivity | There are no known reactivity hazards associated with this product. |
|------------|---------------------------------------------------------------------|

### 10.2. Chemical stability

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| Stability | Stable under normal temperature conditions and recommended use. |
|-----------|-----------------------------------------------------------------|

### 10.3. Possibility of hazardous reactions

|                                    |                                                                                                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Possibility of hazardous reactions | Reacts violently with strong acids. Do not add water directly to the product. It may cause a violent reaction. Risk of bumping (splashes). |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|

### 10.4. Conditions to avoid

|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Conditions to avoid | Heating. Extremes of temperatures. Avoid contact with acids. Avoid frost. |
|---------------------|---------------------------------------------------------------------------|

### 10.5. Incompatible materials

|                    |                                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Materials to avoid | Strong acids. Acids, oxidising. Alkali-sensitive metals such as aluminium, tin, lead and zinc and alloys with these metals. |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------|

### 10.6. Hazardous decomposition products

|                                  |                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------|
| Hazardous decomposition products | In case of fire, toxic gases (CO, CO <sub>2</sub> , NO <sub>x</sub> ) may be formed. |
|----------------------------------|--------------------------------------------------------------------------------------|

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Toxicological Information:

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| Other toxicological data | Toxicological tests on the product has not been performed. |
|--------------------------|------------------------------------------------------------|

#### Toxicological data for substances

|                                                   |                                                                                                                                                        |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substance                                         | Sodium hydroxide                                                                                                                                       |
| LD50 oral                                         | Value: 325 mg/kg bw<br>Animal test species: rabbit<br>Duration: single dose<br>Test reference: -<br>Comments: EU/RAR                                   |
| LDLo oral                                         | Value: 500 mg/kg bw<br>Animal test species: rat<br>Duration: single dose<br>Test reference: -<br>Comments: EU/RAR                                      |
| Other toxicological information for the substance | Acute Toxicity (Dermal LD50): Data lacking. OECD/SIDS 2002.<br>Acute Toxicity (Inhalation LC50): Data lacking. OECD/SIDS 2002.                         |
| Acute toxicity                                    | Ingestion: Strongly corrosive. Even small amounts may cause very severe internal damage and may be fatal. Human/OECD/SIDS 2002.                        |
| Skin corrosion / irritation                       | Species: Yorkshire weanling pigs. Result: Corrosive to skin. (8% NaOH-solution). Duration: 15 min. Method of testing: No information required. EU/RAR. |
| Serious eye damage / irritation                   | Species: Rabbit. Result: Corrosive to eyes. (10% NaOH-solution). Duration: 24h. Method of testing: OECD 405 . ECHA.                                    |
| Substance                                         | Tetrasodium-EDTA                                                                                                                                       |

|                                   |                                                                                                                         |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| LD50 oral                         | Value: > 2000 mg/kg<br>Animal test species: Rat<br>Test reference: BASF                                                 |
| LC50 inhalation                   | Value: 1000 - 5000 mg/m <sup>3</sup><br>Animal test species: Rat<br>Duration: 6 h<br>Test reference: OECD Guideline 403 |
| Skin corrosion / irritation       | Species: Rabbit. Result: Non irritation to skin. Method of testing: Not known.                                          |
| Serious eye damage / irritation   | Species: Rabbit. Result: Irreversible eye damage. Method of testing: Not known.                                         |
| Respiratory or skin sensitisation | Species: Guinea Pig. Result: Not Sensitising.<br>Method of testing: OECD 406                                            |
| Substance                         | Sodium carbonate                                                                                                        |
| LD50 oral                         | Value: 2800 mg/kg<br>Animal test species: Rat<br>Comments: Supplier MSDS                                                |
| LD50 dermal                       | Value: > 2000 mg/kg<br>Animal test species: Rabbit<br>Comments: Supplier MSDS                                           |
| LC50 inhalation                   | Value: 2,3 mg/l<br>Animal test species: Rat<br>Duration: 2h<br>Comments: Supplier MSDS                                  |
| LC50 inhalation                   | Value: 1,2 mg/l<br>Animal test species: Mice<br>Duration: 2h<br>Comments: Supplier MSDS                                 |
| LC50 inhalation                   | Value: 0,8 mg/l<br>Animal test species: guinea pig<br>Duration: 2h<br>Comments: Supplier MSDS                           |
| Skin corrosion / irritation       | Species: Rabbit. Method of testing: Not known. Result: Non irritation to skin.                                          |
| Serious eye damage / irritation   | Species: Rabbit. Method of testing: Not known. Result: Irritation to eye.                                               |
| Respiratory or skin sensitisation | Data lacking.                                                                                                           |

## Other information regarding health hazards

General This substance is corrosive.

## Potential acute effects

|              |                                                                                                                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Aerosols may be corrosive. Inhalation may cause: Serious damage to the lining of nose, throat and lungs.                                                                                                |
| Skin contact | Strongly corrosive. May cause deep tissue damage.                                                                                                                                                       |
| Eye contact  | Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight. |
| Ingestion    | Strongly corrosive. Even small amounts may be fatal. Symptoms are severe burning pains in mouth, throat and stomach. May cause burns in mucous membranes, throat, oesophagus and stomach.               |

## SECTION 12: Ecological information

### 12.1. Toxicity

|                   |                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity       | Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms. |
| Aquatic, comments | No data recorded.                                                                                                                    |

## Toxicological data for substances

|                                            |                                                                                                                                                                  |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substance                                  | Tetrasodium-EDTA                                                                                                                                                 |
| Acute aquatic, fish                        | Value: > 100 mg/l<br>Method of testing: LC50 - OPP 72-1<br>Species: <i>Lepomis macrochirus</i><br>Duration: 96 h                                                 |
| Acute aquatic, algae                       | Value: > 100 mg/l<br>Method of testing: EC50 - Directive 88/302/EØF - C<br>Species: <i>Scenedesmus subspicatus</i><br>Duration: 72 h                             |
| Acute aquatic, Daphnia                     | Value: > 100 mg/l<br>Method of testing: EC50 - DIN 38412 -11<br>Species: <i>Daphnia magna</i><br>Duration: 48 h                                                  |
| Mobility, description                      | Mobility, description: The product is miscible with water. May spread in water systems.                                                                          |
| Persistence and degradability              | The product contains substances which are not expected to be biodegradable.                                                                                      |
| Bioaccumulation                            | Will not bio-accumulate.                                                                                                                                         |
| Bioconcentration factor (BCF)              | Value: ~ 1,8<br>Method of testing: <i>Lepomis macrochirus</i> (28 d)                                                                                             |
| Result of PBT assessment for the substance | Not Classified as PBT/vPvB by current EU criteria.                                                                                                               |
| Substance                                  | Sodium carbonate                                                                                                                                                 |
| Acute aquatic, fish                        | Value: 300 mg/l<br>Method of testing: LC50<br>Species: <i>Lepomis macrochirus</i><br>Duration: 96H                                                               |
| Acute aquatic, Daphnia                     | Value: 200-227 mg/l<br>Method of testing: EC50<br>Species: <i>Ceriodaphnia dubia</i><br>Duration: 48H                                                            |
| Mobility, description                      | Mobility, description: The product is miscible with water. May spread in water systems.                                                                          |
| Persistence and degradability              | This product mainly consists of inorganic compounds which are not biodegradable. The remaining compounds of the product are expected to be easily biodegradable. |
| Bioaccumulation                            | Bioaccumulation: Is not expected to be bioaccumulable.                                                                                                           |
| Result of PBT assessment for the substance | Not Classified as PBT/vPvB by current EU criteria.                                                                                                               |

## 12.2. Persistence and degradability

Chemical oxygen demand (COD) Value: < 250

Persistence and degradability The product is expected to be biodegradable.

## 12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

## 12.4. Mobility in soil

Mobility The product is water soluble and may spread in water systems.

## 12.5. Results of PBT and vPvB assessment

PBT assessment results Not Classified as PBT/vPvB by current EU criteria.

## 12.6. Other adverse effects

Environmental details, summation For this product no classification is required for environmental hazards.

# SECTION 13: Disposal considerations

## 13.1. Waste treatment methods

|                                             |                                                                                                                                                                       |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specify the appropriate methods of disposal | Dispose of waste and residues in accordance with local authority requirements.                                                                                        |
| Product classified as hazardous waste       | Yes                                                                                                                                                                   |
| Packaging classified as hazardous waste     | Yes                                                                                                                                                                   |
| EWC waste code                              | EWC: 0706 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics                                                                        |
| Other Information                           | When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste code applies to product remnants in pure form. |

## SECTION 14: Transport information

### 14.1. UN number

|           |      |
|-----------|------|
| ADR       | 1824 |
| RID       | 1824 |
| IMDG      | 1824 |
| ICAO/IATA | 1824 |

### 14.2. UN proper shipping name

|           |                           |
|-----------|---------------------------|
| ADR       | SODIUM HYDROXIDE SOLUTION |
| RID       | SODIUM HYDROXIDE SOLUTION |
| IMDG      | SODIUM HYDROXIDE SOLUTION |
| ICAO/IATA | SODIUM HYDROXIDE SOLUTION |

### 14.3. Transport hazard class(es)

|            |    |
|------------|----|
| ADR        | 8  |
| Hazard no. | 80 |
| RID        | 8  |
| IMDG       | 8  |
| ICAO/IATA  | 8  |

### 14.4. Packing group

|           |    |
|-----------|----|
| ADR       | II |
| RID       | II |
| IMDG      | II |
| ICAO/IATA | II |

### 14.5. Environmental hazards

### 14.6. Special precautions for user

|                                     |               |
|-------------------------------------|---------------|
| EmS                                 | F-A, S-B      |
| Special safety precautions for user | Not relevant. |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

#### Additional information.

|                         |               |
|-------------------------|---------------|
| Additional information. | Not relevant. |
|-------------------------|---------------|

## SECTION 15: Regulatory information

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

|                         |                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EEC-directive           | Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents.<br>Dangerous Preparations Directive 1999/45/EC.<br>Dangerous Substance Directive 67/548/EEC. |
| Other Label Information | For professional users only.                                                                                                                                                                           |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Legislation and regulations | <p>The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242).</p> <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.</p> <p>The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895).</p> <p>The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242).</p> <p>EH40/2005, Workplace exposure limits 2005, with amendments.</p> |

## 15.2. Chemical safety assessment

|                                      |    |
|--------------------------------------|----|
| Chemical safety assessment performed | No |
|--------------------------------------|----|

## SECTION 16: Other information

### Hazard symbol



Corrosive

|                                                                    |                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R-phrases                                                          | R35 Causes severe burns.                                                                                                                                                                                                                                                                                            |
| S-phrases                                                          | <p>S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.</p> <p>S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p> |
| Classification according to Regulation (EC) No 1272/2008 [CLP/GHS] | Skin Corr 1A; H314;                                                                                                                                                                                                                                                                                                 |
| List of relevant R-phrases (under headings 2 and 3).               | <p>R20/22 Harmful by inhalation and if swallowed.</p> <p>R36 Irritating to eyes.</p> <p>R35 Causes severe burns.</p> <p>R22 Harmful if swallowed.</p> <p>R37/38 Irritating to respiratory system and skin.</p> <p>R41 Risk of serious damage to eyes.</p>                                                           |
| List of relevant H-phrases (Section 2 and 3).                      | <p>H318 Causes Serious eye damage.</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H332 Harmful if inhaled.</p> <p>H319 Causes serious eye irritation.</p>                                                                                                            |
| Training advice                                                    | No particular training or education is required but the user must be familiar with this SDS. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.                                                                        |
| Information which has been added,                                  | Labeling changed to CLP                                                                                                                                                                                                                                                                                             |

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|                                   |             |
|-----------------------------------|-------------|
| deleted or revised                |             |
| Version                           | 2           |
| Responsible for safety data sheet | Novadan ApS |
| Prepared by                       | MP          |