

# SAFETY DATA SHEET

## Stífluleysir (Drain opener)

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 | 11.03.2014 |
|-------------|------------|

#### 1.1. Product identifier

|              |                             |
|--------------|-----------------------------|
| Product name | Stífluleysir (Drain opener) |
| Article no.  | 1472052, 1472054            |

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

|  |  |
|--|--|
| Use of the substance / mixture                 | Drain opener   |
| Relevant identified uses                       | PROC1 Use in closed process, no likelihood of exposure |
| Uses advised against                           | Uses other than those identified are not recommended.  |
| The chemical can be used by the general public | No   |
| The chemical is used by general public only    | No   |

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

|                  |  |
|------------------|--|
| Company name     | Tandur h.f.  |
| Office address   | Hestháis 12  |
| Postcode         | 110  |
| City             | Reykjavík  |
| Country          | ICELAND  |
| Telephone number | 00354 510 1200   |
| Email            | <a href="mailto:tandur@tandur.is">tandur@tandur.is</a> |
| Website          | <a href="http://www.tandur.is">www.tandur.is</a>       |

#### 1.4. Emergency telephone number

|                     |   |
|---------------------|---|
| Emergency telephone | Telephone number: (+354)-543-2222<br>Description: POISON CENTER<br><br>Telephone number: 112<br>Description: EMERGENCY# |
|---------------------|---|

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

|  |  |
|--|--|
| Classification according to 67/548/EEC or 1999/45/EC                 | C; R35                                   |
| Classification according to Regulation (EC) No 1272/2008 [CLP / GHS] | Skin Corr 1A; H314<br>Met. Corr. 1; H290 |

### 2.2. Label elements

#### Hazard pictograms (CLP)



|                          |   |
|--------------------------|---|
| Composition on the label | Sodium hydroxide 30 - 50 % wt/wt  |
| Signal word              | Danger  |
| Hazard statements        | H314 Causes severe skin burns and eye damage.<br>H290 May be corrosive to metals.   |
| Precautionary statements | P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.<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>P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. |

### 2.3. Other hazards

|            |   |
|------------|---|
| PBT / vPvB | 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>Synonyms for section 3:<br>Caustic soda, Lye, Soda lye,<br>Sodium hydrate | C; R35<br>Skin Corr 1A; H314<br>Met. Corr. 1; H290 | 30 - 50 % wt/wt |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|            |  |
|------------|--|
| General    | Show this sheet or relevant SDS to the doctor in attendance.                         |
| Inhalation | If breathing is difficult, remove victim to fresh air and keep at rest in a position |

|  |   |
|--|---|
|  | comfortable for breathing. Get immediate medical advice/attention.  |
| Skin contact   | Flush skin thoroughly with water. Take off contaminated clothing and wash before reuse. Get medical advice/attention.   |
| Eye contact  | Promptly wash eyes with plenty of water while lifting the eye lids. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. Continue flushing during transport to hospital. |
| Ingestion  | Rinse mouth thoroughly. Drink a few glasses of water or milk. Immediately call a POISON CENTER or doctor/physician.   |
| Recommended personal protective equipment for first aid responders | Wear protective gloves / protective clothing / eye protection / face protection.  |

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

|                                  |  |
|----------------------------------|--|
| Information for health personnel | CORROSIVE PRODUCT: Contains CAUSTIC SODA<br>IF IN EYES: Remember to remove lenses if they are present. Ask patient. Continue eye rinsing/treatment. Call an eye specialist in all cases. |
| Acute symptoms and effects       | Causes severe skin burns and eye damage. See further section 11.1 under "Potential Acute Effects"  |

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

# SECTION 5: Firefighting measures

## 5.1. Extinguishing media

|                              |   |
|------------------------------|---|
| Suitable extinguishing media | Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water or alcohol-resistant foam. |
|------------------------------|---|

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

## 5.3. Advice for firefighters

|                               |   |
|-------------------------------|---|
| Personal protective equipment | Wear respiratory protection. Wear protective gloves / protective clothing / eye protection / face protection. |
| Fire fighting procedures      | Fight fire with normal precautions from a reasonable distance.  |

# SECTION 6: Accidental release measures

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

|                               |   |
|-------------------------------|---|
| Personal protection measures  | Wear protective gloves / protective clothing / eye protection / face protection. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Hazardous combustion products | Not relevant.   |

### 6.1.2. For emergency responders

|                          |   |
|--------------------------|---|
| For emergency responders | Wear protective gloves / protective clothing / eye protection / face protection. Call a POISON CENTER or doctor/physician if you feel unwell. |
|--------------------------|---|

## 6.2. Environmental precautions

|                                      |   |
|--------------------------------------|---|
| Environmental precautionary measures | Avoid release to the environment. Collect spillage. |
|--------------------------------------|---|

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

|                 |                              |
|-----------------|------------------------------|
| Cleaning method | Collect spillage.            |
| Containment     | Store in a closed container. |

## 6.4. Reference to other sections

|                    |         |
|--------------------|---------|
| Other instructions | See 8.2 |
|--------------------|---------|

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

|          |   |
|----------|---|
| Handling | Alkalies. First-aid equipment, including eye wash bottle, must be available at the work site. |
|----------|---|

## Protective safety measures

|  |  |
|--|--|
| Preventitive measures to protect the environment | Prevent the product to reach sewage water or drainage system undiluted or unneutralized. Collect spillage if possible. |
| Advice on general occupational hygiene           | Private clothes and working clothes should be kept separately.   |

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

|         |   |
|---------|---|
| Storage | Corrosive storage. Keep in original container. Store protected from acids. Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. |
|---------|---|

## Conditions for safe storage

|   |                |
|---|----------------|
| Technical measures and storage conditions | Alkalies.      |
| Advice on storage compatibility           | Alkalies.      |
| Storage temperature                       | Value: ~ 20 °C |

## 7.3. Specific end use(s)

|                 |         |
|-----------------|---------|
| Specific use(s) | See 1.2 |
|-----------------|---------|

# SECTION 8: Exposure controls / personal protection

## 8.1. Control parameters

| Substance        | Identification  | Exposure limits   | TWA Year       |
|------------------|---|---|----------------|
| Sodium hydroxide | CAS No.: 1310-73-2<br>EC No.: 215-185-5<br>Index No.: 011-002-00-6<br>Synonyms for section 3:<br>Caustic soda, Lye, Soda lye, | <b>Limit value (short term)</b><br>Value: 2 mg/m <sup>3</sup> | TWA Year: 2011 |

## Sodium hydrate

|           |   |
|-----------|---|
| Substance | Sodium hydroxide  |
| DNEL      | <p><b>Group:</b> Worker<br/> <b>Route of exposure:</b> Long term (repeated) - Inhalation - Local effect<br/> <b>Value:</b> 1 mg/m<sup>3</sup></p> <p><b>Group:</b> Consumer<br/> <b>Route of exposure:</b> Long term (repeated) - Inhalation - Local effect<br/> <b>Value:</b> 1 mg/m<sup>3</sup></p> <p><b>Group:</b> Consumer<br/> <b>Route of exposure:</b> Short term (acute) - Dermal - Local effect<br/> <b>Value:</b> 2%</p> <p><b>Group:</b> Worker<br/> <b>Route of exposure:</b> Short term (acute) - Dermal - Local effect<br/> <b>Value:</b> 2%</p> |

## 8.2. Exposure controls

|                                     |   |
|-------------------------------------|---|
| 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. |
|-------------------------------------|---|

### Safety signs



## Precautionary measures to prevent exposure

|   |  |
|---|--|
| Instruction on measures to prevent exposure | Secure access of workers to safety information.  |
| Organisational measures to prevent exposure | Avoid direct contact and/or splashes where possible. Train personnel.                          |
| Technical measures to prevent exposure      | Use only through automatic dosing systems. Use safety glasses/goggles and protective clothing. |

## Respiratory protection

|                                      |  |
|--------------------------------------|--|
| Respiratory protection               | Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type A2/P2). |
| Tasks needing respiratory protection | Not determined.  |

## Hand protection

|   |  |
|---|--|
| Hand protection                             | Wear protective gloves.  |
| Skin- / hand protection, short term contact | <p>Butylrubber:</p> <p>Penetration time: <math>\geq 480</math> min</p> <p>Material thickness: <math>\geq 0,7</math> mm</p> |

|                                |   |
|--------------------------------|---|
| Suitable gloves type           | Butylrubber (prolonged contact)<br>Nitrilrubber (protection against splashes)<br>Chloroprene rubber.<br>Polyvinyl chloride (PVC).<br>Rubber (natural, latex). |
| Reference to relevant standard | EN 374  |
| Thickness of glove material    | Value: $\geq 0,4$ mm  |

## Eye / face protection

|                                |  |
|--------------------------------|--|
| Eye protection                 | Use approved safety goggles or face shield. Safety glasses should have side shields. |
| Suitable eye protection        | Safety glasses should have side shields.   |
| Reference to relevant standard | EN 166   |

## Skin protection

|                                |   |
|--------------------------------|---|
| Skin protection (except hands) | Wear suitable protective clothing as protection against splashing or contamination. |
|--------------------------------|---|

## Appropriate environmental exposure control

|                                 |  |
|---------------------------------|--|
| Environmental exposure controls | Should not reach sewage water or drainage system undiluted or unneutralized. |
|---------------------------------|--|

## Exposure controls

|   |  |
|---|--|
| Exposure controls and personal protection, additional information | To be used only in closed systems (CIP). |
|---|--|

# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

|                               |   |
|-------------------------------|---|
| Physical state                | Colourless liquid.                            |
| Colour                        | Colourless.                                   |
| Odour                         | No characteristic odour.                      |
| pH                            | Status: In delivery state<br>Value: $> 12,5$  |
| Melting point / melting range | Comments: Data lacking.                       |
| Freezing point                | Value: $< 0$ °C<br>Comments: Note determined. |
| Boiling point / boiling range | Comments: Not determined.                     |
| Flash point                   | Comments: Technically not feasible.           |
| Evaporation rate              | Comments: Not determined.                     |
| Flammability                  | Technically not feasible.                     |
| Vapour pressure               | Comments: Not determined.                     |
| Vapour density                | Comments: Not determined.                     |

|                      |  |
|----------------------|--|
| Bulk density         | Value: = 1,42 g/ml<br>Temperature: ~ 20 °C |
| Solubility in water  | Soluble in all proportions.                |
| Viscosity            | Comments: Not determined.                  |
| Oxidising properties | None.                                      |

## 9.2. Other information

### Physical hazards

|                 |  |
|-----------------|--|
| Metal corrosion | Corrosive to light metals including aluminium. |
|-----------------|--|

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

|            |  |
|------------|--|
| Reactivity | Reactivity issues of concern are mainly due to the caustic soda content of the mixture. Caustic soda is a highly reactive substance. It is corrosive on live tissue. It corrodes light metals such as aluminium, releasing hydrogen gas as a byproduct. It may also damage certain types of surface material such as some different floor types. These effects of caustic soda become less and less significant as the mixture is diluted with water.<br>If the mixture is stored and used as recommended there should be no danger due to its reactivity. |
|------------|--|

### 10.2. Chemical stability

|           |  |
|-----------|--|
| Stability | The mixture is stable under normal storage and use conditions. |
|-----------|--|

### 10.3. Possibility of hazardous reactions

|                                    |   |
|------------------------------------|---|
| Possibility of hazardous reactions | No hazardous reactions known under normal storage and use conditions. |
|------------------------------------|---|

### 10.4. Conditions to avoid

|                     |   |
|---------------------|---|
| Conditions to avoid | May attack light-alloy metals and liberate hydrogen gas. The solution is strongly alkaline and reacts with strong acids with heat generation. |
|---------------------|---|

### 10.5. Incompatible materials

|                    |   |
|--------------------|---|
| Materials to avoid | Acid reactive. Will corrode copper, zinc, aluminium and their alloys. |
|--------------------|---|

### 10.6. Hazardous decomposition products

|                                  |                                      |
|----------------------------------|--------------------------------------|
| Hazardous decomposition products | No hazardous decomposition products. |
|----------------------------------|--------------------------------------|

## SECTION 11: Toxicological information

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

#### Toxicological data for substances

|                                    |  |
|------------------------------------|--|
| Substance                          | Sodium hydroxide   |
| Acute toxicity                     | <p><b>Type of toxicity:</b> Acute<br/> <b>Effect tested:</b> LD50<br/> <b>Route of exposure:</b> Oral<br/> <b>Value:</b> = 1350 mg/kg<br/> <b>Animal test species:</b> Rat<br/> <b>Test reference:</b> Method not given</p> <p><b>Type of toxicity:</b> Acute<br/> <b>Effect tested:</b> LD50<br/> <b>Route of exposure:</b> Dermal<br/> <b>Value:</b> = 1350 mg/kg<br/> <b>Animal test species:</b> Rabbit<br/> <b>Test reference:</b> Method not given</p> <p><b>Type of toxicity:</b> Acute<br/> <b>Effect tested:</b> LC50<br/> <b>Route of exposure:</b> Inhalation.<br/> <b>Value:</b> = 4800 mg/l<br/> <b>Animal test species:</b> Mouse<br/> <b>Test reference:</b> Method not given</p> |
| Inhalation                         | Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Dust is corrosive.  |
| Skin contact                       | Corrosive. Burning pain and severe corrosive skin damage.  |
| Eye contact                        | Risk of serious damage to eyes.  |
| Ingestion                          | Causes severe burns.   |
| Mutagenicity                       | No data recorded.  |
| Carcinogenicity, other information | No data recorded.  |
| Reproductive toxicity              | No data recorded.  |

### Other information regarding health hazards

|         |                              |
|---------|------------------------------|
| General | This substance is corrosive. |
|---------|------------------------------|

### Potential acute effects

|              |   |
|--------------|---|
| Inhalation   | Highly Corrosive. Serious damage to the lining of nose, throat and lungs.           |
| Skin contact | Causes severe burns.  |
| Eye contact  | Highly Corrosive. Risk of serious damage to eyes. Immediate first aid is necessary. |
| Ingestion    | Corrosive. Even small amounts may cause serious damage.                             |

### Symptoms of exposure

|          |         |
|----------|---------|
| Comments | See 4.1 |
|----------|---------|

## SECTION 12: Ecological information

## 12.1. Toxicity

## 12.2. Persistence and degradability

|   |  |
|---|--|
| Substance                               | Sodium hydroxide   |
| Aquatic toxicity, fish                  | <b>Value:</b> = 196 mg/l<br><b>Test duration:</b> 96 h<br><b>Species:</b> Various species  |
| Aquatic toxicity, algae                 | <b>Value:</b> = 22 mg/l<br><b>Test duration:</b> 0,25 h<br><b>Species:</b> Photobacterium phsophoreum<br><b>Method:</b> Method not given |
| Aquatic toxicity, crustacean            | <b>Value:</b> = 40,4 mg/l<br><b>Test duration:</b> 48 h  |
| Persistence and degradability, comments | The product contains caustic soda which is an inorganic water soluble salt. Biodegradability is therefore not relevant.                  |

## 12.3. Bioaccumulative potential

|                           |                   |
|---------------------------|-------------------|
| Bioaccumulative potential | No data recorded. |
|---------------------------|-------------------|

## 12.4. Mobility in soil

|          |   |
|----------|---|
| Mobility | Not regarded as dangerous for the environment.<br>However, the product is highly alkaline and may affect local environment due to high pH value. Upon dilution, alkalinity/pH value drops rapidly and effects decrease accordingly. |
|----------|---|

## 12.5. Results of PBT and vPvB assessment

|                        |   |
|------------------------|---|
| PBT assessment results | This product does not contain any PBT or vPvB substances. |
|------------------------|---|

## 12.6. Other adverse effects

# SECTION 13: Disposal considerations

## 13.1. Waste treatment methods

|   |  |
|---|--|
| Specify the appropriate methods of disposal | Avoid release to the environment. Dispose of waste and residues in accordance with local authority requirements. |
| Relevant waste regulation                   | Reglugerð 737/2003   |
| Hazardous waste packing                     | Avoid release to the environment.  |
| Product classified as hazardous waste       | Yes  |
| Packaging classified as hazardous waste     | Yes  |
| EWC waste code                              | EWC: 060204 sodium and potassium hydroxide   |
| National regulations                        | Regulation 184/2002  |
| Other information                           | Disposal to licensed waste disposal site in accordance with local Waste Disposal                                 |

|            |
|------------|
| Authority. |
|------------|

## SECTION 14: Transport information

### 14.1. UN number

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

### 14.2. UN proper shipping name

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

### 14.3. Transport hazard class(es)

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

### 14.4. Packing group

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

### 14.5. Environmental hazards

### 14.6. Special precautions for user

|     |          |
|-----|----------|
| EmS | F-A, S-B |
|-----|----------|

### 14.7. Maritime transport in bulk according to IMO instruments

## SECTION 15: Regulatory information

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

|                             |   |
|-----------------------------|---|
| Legislation and regulations | This safety datasheet is in compliance with the following EU legislation and its adaptations - as far as applicable:<br>Regulation 1907/2006 and later 750/2008 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Amendments |
|-----------------------------|---|

on Annex II of the REACH regulation with EU regulation 453/2010. Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures which replaces EU legislations 67/548/EEC and 1999/45/EEC and changes regulation No. 1907/2006.

## 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

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 After contact with skin, wash immediately with plenty of water.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

Met. Corr. 1; H290;  
Skin Corr 1A; H314;

List of relevant R-phrases (under headings 2 and 3).

R35 Causes severe burns.

List of relevant H-phrases (Section 2 and 3)

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

Abbreviations and acronyms used

GHS: Globally Harmonized System  
CLP: Classification, labelling and packaging  
DNEL: Derived No Effect Limit (afleidd áhrifaleysismörk).  
PBT: Persistent, Bioaccumulative and Toxic  
PNEC: Predicted No Effect Concentration  
vPvB: Very Persistent and very Bioaccumulative  
REACH: Registration, Evaluation, Authorization and Restriction of Chemicals.

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## Exposure Scenario Format (1) worker activities/exposure

### 1. Exposure Scenario

#### Section 2

### Section 3

### Section 4

### Section 5