SAFETY DATA SHEET

T-Ofn&grillhreinsir

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	23.09.2014

1.1. Product identifier

Product name	T-Ofn&grillhreinsir
Article no.	1076012, 1076014

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

Use of the substance / mixture	Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Company name	Tandur h.f.
Office address	Hesthals 12
Postcode	110
City	Reykjavík
Country	ICELAND
Telephone number	00354 510 1200
Email	tandur@tandur.is
Website	www.tandur.is

1.4. Emergency telephone number

Emergency telephone	Telephone number: (+354)-543-2222 Description: POISON CENTER Telephone number: 112 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

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	Sodium hydroxide 5 - 15 % wt/wt
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. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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 EC No.: 215-185-5 Index No.: 011-002-00-6 Synonyms for section 3: Caustic soda, Lye, Soda lye, Sodium hydrate	C; R35 Skin Corr 1A; H314 Met. Corr. 1; H290	5 - 15 % wt/wt

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Call a POISON CENTER or doctor/physician if you feel unwell. Show this SDS.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
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 medical attention immediately! Continue flushing during transport to hospital.
Ingestion	Rinse mouth thoroughly. Drink a few glasses of water or milk. Get immediate medical advice/attention.
Recommended personal protective equipment for first aid responders	Wear protective gloves / protective clothing / eye protection / face protection. See further section 8.2

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

Information for health personnel	CORROSIVE PRODUCT: Contains CAUSTIC SODA
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	Water spray, foam, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	Not known.

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

General measures	Stop leak if safe to do so.
Personal protection measures	Wear protective gloves / protective clothing / eye protection / face protection.
Hazardous combustion products	Not known.

6.1.2. For emergency responders

For emergency responders	Wear protective clothing as described in Section 8 of this safety data sheet. Call a POISON CENTER or doctor/physician if you feel unwell.

6.2. Environmental precautions

Environmental precautionary measures	Avoid release to the environment. Collect and dispose of spillage as indicated in section 13.

6.3. Methods and material for containment and cleaning up

Containment	Store in a closed container.

6.4. Reference to other sections

Other instructions	See section 8 and 13 for further details.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Provide easy access to water supply and eye wash facilities.

Protective safety measures

Preventititve 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	Alkalis. Avoid contact with skin and eyes. Keep away from food, drink and animal feeding stuffs. Keep containers tightly closed. Keep in original container. Store protected from acids.

Conditions for safe storage

Technical measures and storage conditions	Alkalis.
Requirements for storage rooms and vessels	Keep only in original container.
Advice on storage compatability	Alkalis.
Storage temperature	Value: ~ 20 °C

7.3. Specific end use(s)

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Sodium hydroxide	CAS No.: 1310-73-2 EC No.: 215-185-5 Index No.: 011-002-00-6 Synonyms for section 3: Caustic soda, Lye, Soda lye, Sodium hydrate	**Limit value (short term)** Value: 2 mg/m3	TWA Year: 2011

Substance	Sodium hydroxide
DNEL	**Group:** Worker **Route of exposure:** Long term (repeated) - Inhalation - Local effect **Value:** 1 mg/m3

	Group: Consumer **Route of exposure:** Long term (repeated) - Inhalation - Local effect **Value:** 1 mg/m3 **Group:** Consumer **Route of exposure:** Short term (acute) - Dermal - Local effect **Value:** 2% **Group:** Worker **Route of exposure:** Short term (acute) - Dermal - Local effect **Value:** 2%

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. Protective gloves and goggles are recommended. An eye wash bottle must be available at the work site.

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	Where possible: use through foam systems and cover open containers. 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).

Hand protection

Hand protection	Chemical resistant gloves required for prolonged or repeated contact.
Skin- / hand protection, short term contact	Nitril rubber: Penetration time: >= 30 min Material thickness: >= 0,4 mm
Skin- / hand protection, long term contact	Butylrubber: Penetration time: >= 480 min Material thickness: >= 0,7 mm
Suitable gloves type	Butyl rubber. Nitrile. Chloroprene rubber. Polyvinyl chloride (PVC). Rubber (natural, latex).
Reference to relevant standard	Chemical-resistant protective gloves (EN 374).

Thickness of glove material	Value: >= 0,4 mm

Eye / face protection

Eye protection	Use approved safety glasses, 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
Additional eye protection measures	Provide easy access to water supply and eye wash facilities.

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 or drainage system undiluted or unneutralized.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Clear liquid.
Colour	Colourless.
pH	Status: In delivery state Value: > 12,5 Temperature: ~ 20 °C
Relative density	Value: = 1,1 g/ml Temperature: ~ 20 °C
Solubility in water	Fully miscible.

9.2. Other information

Physical hazards

Metal corrosion	Corrosive to aluminium and other light metals.

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. 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	**Type of toxicity:** Acute **Effect tested:** LD50 **Route of exposure:** Oral **Value:** = 1350 mg/kg **Animal test species:** Rat **Test reference:** Method not given **Type of toxicity:** Acute **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** = 1350 mg/kg **Animal test species:** Rabbit **Test reference:** Method not given **Type of toxicity:** Acute **Effect tested:** LC50 **Route of exposure:** Inhalation. **Value:** = 4800 mg/l **Animal test species:** Mouse **Test reference:** Method not given
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.

Potential acute effects

Inhalation	May cause respiratory irritation.
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.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity, other information	No information or data available on mixture. However, there is no evidence of carciogenicity on individual substances in the mixture.
Mutagenicity	No information available on mixture. However, studies have not shown any indication of mutagenicity of individual substances in the mixture.
Reproductive toxicity	No information or data available on mixture. However, studies have not shown any indication of reproductive toxicity for individual substances in the mixture.

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	**Value:** = 196 mg/l **Test duration:** 96 h **Species:** Various species
Aquatic toxicity, algae	**Value:** = 22 mg/l **Test duration:** 0,25 h **Species:** Photobacterium phsophoreum **Method:** Method not given
Aquatic toxicity, crustacean	**Value:** = 40,4 mg/l **Test duration:** 48 h
Persistence and degradability, comments	No information available on mixture. However, individual substances are all classified as readily biodegradable.

12.3. Bioaccumulative potential

12.4. Mobility in soil

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

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	Regulation no. 737/2003
Hazardous waste product	Avoid release to the environment.
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 Regulation 786/1999
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
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	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.

15.2. Chemical safety assessment

Chemical safety assessment performed	No

SECTION 16: Other information

Hazard symbol

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. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	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	CLP: Classification, labelling and packaging GHS: Globally Harmonized System. 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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