

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

1.1. Product identifier

Name of the substance	Sodium hydroxide
Trade name of the substance	Caustic Soda
Identification number	011-002-00-6 (Index number)
Registration number	01-2119457892-27-0063
Synonyms	None.
Issue date	29-January-2018
Version number	02
Revision date	02-August-2019
Supersedes date	29-January-2018

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

Identified uses	Industrial, professional and consumer use. Other registered uses for this product can be found in section 15 of this SDS.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier/OR	LUKOIL Neftohim Burgas AD
Address	Burgas 8104, Bulgaria
Telephone	+35955115654
Fax	+35955115555
E-mail	SDS@neftochim.bg
Manufacturer	KARPATNAFTOCHIM LTD
Address	Promyslova str., 4., 77306 Kalusch, Iwano-Frankiwnsk region, Ukraine
Fax	+38 034 726 64 60, +38 034 726 04 25
E-mail	mail@knh.com.ua
Website	www.knh.com.ua
1.4. Emergency telephone number	+1-760-476-3961 (333368)

General in EU	112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Corrosive to metals	Category 1	H290 - May be corrosive to metals.
Health hazards		
Skin corrosion/irritation	Category 1A	H314 - Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.

Hazard summary	Causes skin, eye and digestive tract burns. Spray mists may cause respiratory tract irritation. Occupational exposure to the substance or mixture may cause adverse health effects.
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2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Sodium hydroxide
Hazard pictograms	



Signal word	Danger
Hazard statements	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
Precautionary statements	
Prevention	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe gas/mist/vapours/spray.
Response	
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P310	Immediately call a POISON CENTRE or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Not assigned.
Disposal	Not assigned.
Supplemental label information	None.
2.3. Other hazards	The PBT and vPvB criteria of Annex XIII to the Regulation does not apply to inorganic substances.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Sodium hydroxide	49 - 51	1310-73-2 215-185-5	01-2119457892-27-0063	011-002-00-6	
Classification:	Met. Corr. 1;H290, Skin Corr. 1A;H314, Eye Dam. 1;H318				

Additional components

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Water	49 - 51	7732-18-5 231-791-2	-	-	

Composition comments	This product is registered under the REACH Regulation 1907/2006 as a mono-constituent substance. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all H-statements is displayed in section 16.
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SECTION 4: First aid measures

General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
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4.1. Description of first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention immediately. Chemical burns must be treated by a physician.
Eye contact	Do not rub eye. Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Seek immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed	Contact with this material will cause burns to the skin, eyes and mucous membranes.
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4.3. Indication of any immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm.
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SECTION 5: Firefighting measures

General fire hazards	The product is non-combustible. Contact with certain metals liberates flammable gas. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.
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5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
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Unsuitable extinguishing media	None known.
5.2. Special hazards arising from the substance or mixture	Fire may produce irritating, corrosive and/or toxic gases.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Special fire fighting procedures	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discolouration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Local authorities should be advised if significant spillages cannot be contained. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas. Avoid inhalation of dust and contact with skin and eyes. Use Personal Protective Equipment recommended in section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Prevent further leakage or spillage if safe to do so.
6.3. Methods and material for containment and cleaning up	Should not be released into the environment. Large Spills: Dike far ahead of spill for later disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Small Spills: Shovel into metal container and keep material under water. After removal flush contaminated area thoroughly with water. Never return spills in original containers for re-use.
6.4. Reference to other sections	See Section 8 for personal protective equipment. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Handle and open container with care. Use only with adequate ventilation. Avoid inhalation of mist and contact with skin and eyes. Add material slowly when mixing with water. Do not add water to the material; instead, add the material to the water. Wash thoroughly after handling. Use Personal Protective Equipment recommended in section 8 of the SDS.
7.2. Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep this material away from food, drink and animal feed. Use care in handling/storage.
7.3. Specific end use(s)	For detailed information, see section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)		
Material	Type	Value
Sodium hydroxide (CAS 1310-73-2)	STEL	2 mg/m3
Biological limit values	No biological exposure limits noted for the ingredient(s).	
Recommended monitoring procedures	Follow standard monitoring procedures.	

Derived no effect levels (DNELs)

General Population

Product	Value	Assessment factor	Notes
Sodium hydroxide (CAS 1310-73-2)			
Long-term, Local, Inhalation	1 mg/m3		

Workers

Product	Value	Assessment factor	Notes
Sodium hydroxide (CAS 1310-73-2)			
Long-term, Local, Inhalation	1 mg/m3		

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Provide easy access to water supply and eye wash facilities.

8.2. Exposure controls

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Risk of splashes: Wear approved chemical safety goggles. Eye protection should meet standard EN 166.

Skin protection

- Hand protection Wear suitable gloves tested to EN374. Suitable gloves can be recommended by the glove supplier.

Butyl rubber. Polyvinyl chloride (PVC). Polychloroprene rubber.

- material thickness: 0.5 mm
- break through time: > 480 min

Nitrile rubber. Fluorinated rubber.

- material thickness: 0.35 - 0.40 mm
- break through time: > 480 min

- Other

Respiratory protection In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove and isolate contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practices. Launder contaminated clothing before reuse.

Environmental exposure controls Environmental manager must be informed of all releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Colour Colourless, clear.

Odour None specific.

Odour threshold Not available.

pH Not available.

Melting point/freezing point 323 °C (613.4 °F)

Initial boiling point and boiling range 1388 °C (2530.4 °F)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure < 0.00001 hPa (25 °C (77 °F))

Vapour density Not available.

Relative density Not available.

Solubility(ies) 1000 mg/m³ (25 °C (77 °F))

Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Density 2.13 g/cm³

Molecular formula H-Na-O

Molecular weight 40 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity Reacts violently with water.

10.2. Chemical stability Stable at normal conditions.

10.3. Possibility of hazardous reactions Hazardous polymerisation does not occur.

10.4. Conditions to avoid Protect against direct sunlight. Exposure to moisture. Freezing.

10.5. Incompatible materials Acids. Organic material.

10.6. Hazardous decomposition products Hydrogen.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Causes severe respiratory tract irritation.

Skin contact Causes severe skin burns. Causes permanent skin damage (scarring).

Eye contact Causes severe eye burns. Causes permanent eye injury.

Ingestion Causes digestive tract burns. May cause burns of the gastrointestinal tract if swallowed. Harmful if swallowed.

Symptoms Contact can cause corrosive burns, corneal damage, and blindness.

11.1. Information on toxicological effects

Acute toxicity Corrosive. Causes skin, eye and digestive tract burns.

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory sensitisation Based on available data, the classification criteria are not met.

Skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Mixture versus substance information	Not available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
12.2. Persistence and degradability	The product is not biodegradable.
12.3. Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient n-octanol/water (log Kow)	Not applicable.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	The product is soluble in water.
Mobility in general	The product is water soluble and may spread in water systems.
12.5. Results of PBT and vPvB assessment	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
12.6. Other adverse effects	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Not available.
EU waste code	06 02 04*
Disposal methods/information	Dispose in accordance with all applicable regulations. This material and its container must be disposed of in a safe way.

SECTION 14: Transport information

ADR

14.1. UN number	UN1824
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Hazard No. (ADR)	80
Tunnel restriction code	E
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1824
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN1824
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8

14.4. Packing group II
 14.5. Environmental hazards No.
 14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number UN1824
 14.2. UN proper shipping name Sodium hydroxide solution
 14.3. Transport hazard class(es)
 Class 8
 Subsidiary risk -
 14.4. Packing group II
 14.5. Environmental hazards No.
 ERG Code 8L
 14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number UN1824
 14.2. UN proper shipping name SODIUM HYDROXIDE SOLUTION
 14.3. Transport hazard class(es)
 Class 8
 Subsidiary risk -
 14.4. Packing group II
 14.5. Environmental hazards
 Marine pollutant No.
 EmS F-A, S-B
 14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II.
 This product is listed in the IBC Code.
 Product name: Sodium hydroxide solution
 Pollution category: Y
 The product hazard category is: S/P
 Ship type: 3

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
 Not listed.
 Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
 Not listed.
 Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
 Not listed.
 Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
 Not listed.
 Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
 Not listed.
 Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
 Not listed.
 Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended
 Not listed.
 Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
 Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
 Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
 Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended.

National regulations

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

Identified Uses:

Use as laboratory agent.

Other registered uses:

Manufacture of substance.

Formulation & (re) packaging of substances and mixtures.

Use as a substance as intermediate.

SECTION 16: Other information

List of abbreviations

PBT: Persistent, bioaccumulative and toxic.

vPvB: Very Persistent and very Bioaccumulative.

References

IUCLID

Chemical safety report.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

This SDS contains revisions in the following section(s):

1, 2, 3, 7, 8, 9, 11, 12, 14, 15, 16.

Training information

Follow training instructions when handling this material.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available at the date of revision and exclusively refer to the product in its as-delivered condition. The information and recommendations are offered for the user's consideration and examination. The logo and the name "LUKOIL oil company" may include anyone or more of LUKOIL Neftohim Burgas AD or LUKOIL or any affiliates in which they directly or indirectly hold any interest.