

Product information na 2 (*liquid neutralisation agent*)

Use

na 2 is an liquid neutralisation agent on a sodium hydroxide basis. It is recommended for cleaning operations to neutralise the acid cleaning agents and detergents.

Features

Appearance:	clear, colorless liquid
physical state:	fluent
pH-value:	14 (bei 20°C)
density:	1.480 kg/m ³ (at 20°C)
water solubility:	999 g/l

These data are to be seen as typical values and are not to be considered as specifications.

Dosing

na 2 may be fed directly from the drum by a suitable chemical feed system. **na 2** should be dosed directly into the cooling water system at a location where good distribution can be assured. To neutralise an acid solution, **na 2** is added in portions until the requested pH-value is reached (usually pH 6,5 – 9,5). The dosing rate depends on the type of system and operational parameters. Typical system concentration is between 1% - 1,5% of the system volume.

Attention:

In case it is added too fast this may lead to an extreme exothermic reaction!

Never mix up acid and alkaline concentrates with each other. This may lead to spontaneous exothermic reactions!

Handling precautions

Wear suitable protective gloves and safety goggles. Avoid eye or skin contact. In case of contact with eyes and skin immediately flush with plenty of water. After eye contact seek medical advice. Take off polluted clothes immediately.

In case of spillage, absorb with sand or other absorbent materials and sweep up. Then flush the area with plenty of water. Before use review the Material Safety Data Sheet for additional information.

Important Information

Every chemical product will be delivered with a Material Safety Data Sheet. Material Safety Data Sheets contain health and safety information relevant for your development of appropriate product handling procedures to protect your employees and customers. Our Material Safety Data Sheets should be read and understood by all of your supervisory personal and employees before using our products in your facilities.

Shelf life

2 years in originally sealed containers.
6 months in opened containers.
Storage conditions: cool (5°C – 20°C), frost-free, dark and dry.

Packaging

na 2 is packed in 10kg drums, 30kg drums and 200kg drums.

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Safety Data Sheet

Revision date: 04.04.2018

according to Regulation (EC) No. 1907/2006 (REACH)

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according to Regulation (EU) 2015/830

na 2

Version: 3.1

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

1.1. product identifiers

Identification of the substance or mixture na 2

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

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

gwK Gesellschaft Wärme Kältetechnik mbH

Scherl 10

D-58540 Meinerzhagen

Telephone: +49 2354 7060 0

Telefax: +49 2354 7060 156

E-mail

info@gwk.com

1.4. Emergency telephone number

Emergency telephone number

Poison Centre Berlin +49 (0) 30 30686700

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Met. Corr. 1 / H290

Corrosive to metals

May be corrosive to metals.

Skin Corr. 1A / H314

skin corrosion/irritation

Causes severe skin burns and eye damage.

2.2. Label elements

The product is classified and labelled according to EC directives or corresponding national laws.

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Danger

Hazard statements

H314

Causes severe skin burns and eye damage.

H290

May be corrosive to metals.

Precautionary statements

P280

Wear protective gloves and eye/face protection.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501

Dispose of contents/container to industrial incineration plant.

contains:

sodium hydroxide

Supplemental Hazard information (EU)

not applicable

2.3. Other hazards

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Product description / chemical characterization

Description

Hazardous ingredients

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

EC No.

REACH No.

CAS No.

Chemical name

Wt %



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INDEX No.	classification: // Remark	
215-185-5	01-2119457892-27-xxxx	
1310-73-2	sodium hydroxide	25 - 50
011-002-00-6	Met. Corr. 1 H290 / Skin Corr. 1A H314	

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.

In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing.

Wash immediately with: Water

Medical treatment necessary.

After eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical advice immediately.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious).

Let water be drunk in little sips (dilution effect). Seek medical advice immediately.

Keep victim calm.

Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

Treatment

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, Powder, spray mist, (water), Foam

Extinguishing media which must not be used for safety reasons:

strong water jet

5.2. Special hazards arising from the substance or mixture

Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protection equipment. Provide adequate ventilation. Do not breathe vapours.

6.2. Environmental precautions



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Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid contact with eyes and skin. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Handle and open container with care. When using do not eat, drink or smoke. Avoid the formation of aerosol.

7.2. Conditions for safe storage, including any incompatibilities

Packaging materials:

Unsuitable container/equipment material: Metal

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place.

Hints on joint storage

Do not store together with: Acid

Further information on storage conditions

Take care of instructions on label.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

not applicable

DNEL:

sodium hydroxide

INDEX No. 011-002-00-6 / EC No. 215-185-5 / CAS No. 1310-73-2

DNEL long-term inhalative (local), Workers: 1 mg/m³

DNEL acute inhalative (local), Consumer: 1 mg/m³

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction.

Occupational exposure controls

Respiratory protection

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection

Wear closely fitting protective glasses in case of splashes.

Protective clothing

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.



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according to Regulation (EU) 2015/830

na 2

Revision date: 04.04.2018

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Environmental exposure controls

Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical state: Liquid
Colour: colourless

Odour: odourless

Odour threshold: not applicable

pH at 20 °C: 14

Melting point/freezing point: not applicable

Initial boiling point and boiling range: 100 °C

Flash point: not applicable

Evaporation rate: not applicable

Flammability (solid, gas):

Burning time (s): not applicable

Upper/lower flammability or explosive limits:

Lower explosion limit: not applicable

Upper explosion limit: not applicable

Vapour pressure at 20 °C: 11 mbar

Vapour density: not applicable

Relative density:

Density at 20 °C: 1,48 g/cm³

Solubility(ies):

Water solubility (g/L) at 20 °C: 999

Partition coefficient: n-octanol/water: see section 12

Auto-ignition temperature: not applicable

Decomposition temperature: not applicable

Viscosity at 20 °C: < 20 mPa·s

Explosive properties: not applicable

Oxidising properties: not applicable

9.2. Other information

Solid content (%): 45,00 Wt %

solvent content:

Organic solvents: 0 Wt %

Water: 0 Wt %

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures. e.g.: Hydrogen



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SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
No data on preparation itself available.

11.1. Information on toxicological effects

Acute toxicity

sodium hydroxide
oral, LDLo., Rat: 500 mg/kg

skin corrosion/irritation; Serious eye damage/eye irritation

Sodium hydroxide solution 45%
Skin (4 h)

sodium hydroxide
Skin
eyes

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

Toxicological data are not available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Toxicological data are not available.

Specific target organ toxicity

Toxicological data are not available.

Aspiration hazard

Toxicological data are not available.

Practical experience/human evidence

Other observations:

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Remark

There is no information available on the preparation itself .

SECTION 12: Ecological information

overall evaluation

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

Do not allow to enter into surface water or drains.

12.1. Toxicity

Sodium hydroxide solution 45%

Fish toxicity, LC50, Gambusia affinis (Mosquito fish): 125 mg/l (96 h)

Acute (short-term) daphnia toxicity, EC50, Daphnia magna (Big water flea): 76 mg/l (24 h)

sodium hydroxide

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 45,4 mg/l (96 h)

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 40,4 mg/l (48 h)

Acute (short-term) fish toxicity, LC50., Lepomis macrochirus (Bluegill): 99 mg/l (48 h)

Long-term Ecotoxicity

Toxicological data are not available.

12.2. Persistence and degradability

Toxicological data are not available.

12.3. Bioaccumulative potential

sodium hydroxide

Partition coefficient: n-octanol/water:

Bioconcentration factor (BCF)

Toxicological data are not available.



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12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

packaging

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number

UN 1824

14.2. UN proper shipping name

Land transport (ADR/RID):

Sodium hydroxide solution
(Sodium hydroxide)

Sea transport (IMDG):

SODIUM HYDROXIDE SOLUTION
(Sodium hydroxide)

Air transport (ICAO-TI / IATA-DGR):

Sodium hydroxide solution
(Sodium hydroxide)

14.3. Transport hazard class(es)

8

14.4. Packing group

II

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

tunnel restriction code

E

Sea transport (IMDG)

EmS-No.

F-A, S-B

Air transport (ICAO-TI / IATA-DGR)

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 0

National regulations



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Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Substance/product listed in the following inventories:

AICS keine Information (AICSK-EN.rtf)

DSL keine Information (DSLK-EN.rtf)

IECSC keine Information (IECSCK-EN.rtf)

KECI keine Information (KECIK-EN.rtf)

MITI keine Information (MITIK-EN.rtf)

PICCS keine Information (PICCSK-EN.rtf)

No information of listing in TOXIC SUBSTANCES CONTROL ACT (TSCA)

15.2. Chemical Safety Assessment

For the following substances of this preparation a chemical safety assessment has been carried out:

EC No.	Chemical name	REACH No.
CAS No.		
215-185-5	sodium hydroxide	01-2119457892-27-xxxx
1310-73-2		

SECTION 16: Other information

Full text of classification in section 3:

Met. Corr. 1 / H290

Corrosive to metals

May be corrosive to metals.

Skin Corr. 1A / H314

skin corrosion/irritation

Causes severe skin burns and eye damage.

Abbreviations and acronyms

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.