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

1.1 Product identifier

Identification / trade name: Art. 2110, GL 95
REACH registration number: not notifiable

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

Use of the substance / mixture:
Dish washing agent

1.3 Details of the supplier of the safety data sheet

Supplier / Manufacturer: HWR-CHEMIE GmbH
Moosfeldstrasse 7
D-82275 Emmering

Telephone: 0049-8141-51030
Telefax: 0049-8141-510355
E-mail: info@hwr-chemie.de

E-mail (competent person): infoSDB@hwr-chemie.de
Information contact: Laboratory

1.4 Emergency phone

Emergency phone Germany: 0049-8141-51030 (only during office hours)
Emergency phone Austria: 0043 1 406 43 43 (poison information centre)

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008
Met. Corr. 1, H290; Skin Corr. 1B, H314

2.2 Label elements

Regulation (EC) No 1272/2008

Hazard pictograms

Signal word: Danger.

Continued on next page

Hazard components for labeling

potassium hydroxide, sodium metasilicate

Hazard statements

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

Precautionary statements

P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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 at hazardous or special waste collection point.

2.3 Other hazards

The substances in this mixture do not meet the PBT/vPvB criteria of REACH, annex XIII.
The substances in this mixture do not have any endocrine disrupting properties.

SECTION 3. Composition / information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Chemical characterization

Mixture of amphoteric surfactants, alkalis, builders and complexing agents in water.

Hazardous ingredients

5 - 15 % Potassium hydroxide (45 %), EG 215-181-3, CAS 1310-58-3, Acute Tox. 4, H302; Skin corr. 1A, H314; Met. Corr. 1, H290
5 - 15 % Sodium metasilicate, EG 229-912-9, CAS 6834-92-0, Met. Corr. 1, H290; Skin corr. 1B, H314; STOT SE 3, H335

Additional information

Full text of hazard classes and H-phrases: see section 16

SECTION 4. First aid measures

4.1 Description of first aid measures

General informations: In case of persistent symptoms seek medical advice. Remove contaminated clothing. In case of unconsciousness place patient into stable side position for transportation. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

In case of inhalation: Provide affected person with fresh air and seek medical advice depending on the symptoms.

In case of skin contact: Contaminated, soaked clothing should be immediately removed. Wash skin thoroughly with soap and water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Continued on next page

In case of eye contact: Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

In case of ingestion: Rinse mouth immediately and then drink plenty of water. Do not induce vomiting. Seek medical advice at once.

Additional hints: Self-protection of the first aider: wear protective clothing, gloves and safety goggles (see Section 8).

4.2 Most important symptoms and effects, both acute and delayed

Contact with eyes may cause reddening, running eyes and smarting pain. Prolonged contact may lead to irreversible damage up to blindness. Ingestion may cause severe pain in the digestive tract. Possible burn of the upper part of gastrointestinal tract. Inhalation may cause cough and shortness of breath. Risk of pulmonary oedema.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment (decontamination, vital functions), no known specific antidote.

SECTION 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet / foam / CO2 / dry extinguishing powder

Unsuitable extinguishing media: Full water jet, extinguishing powder with ammonium salts.

5.2 Special hazards arising from the substance or mixture

Spilled material reacts with certain metals (e.g. lead, aluminium, zinc and magnesium) to form hydrogen gas. In case of fire may be liberated: corrosive vapors.

5.3 Advice for fire-fighters

The product itself is not flammable. Co-ordinate fire-fighting measures to the fire surroundings.
Special protective equipment: Wear full protective suit with self-contained breathing apparatus.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear protective equipment.

6.2 Environmental precautions

Large quantities of spills should be contained by. Do not allow to enter undiluted into surface water or drains.

6.3 Methods and material for containment and cleaning up

Absorb with an absorbent material and dispose of according to local regulations.
Acids may be used for pH neutralization.

6.4 Reference to other sections

Observe protective measures in sections 8 and disposal considerations in section 13.

Continued on next page

SECTION 7. Handling and Storage

7.1 Precautions for safe handling

Advices on safe handling

Wear protective clothing. Open carefully and keep container closed when not in use.
General hygiene measures:
- Eating, drinking or smoking is prohibited in areas, where work is performed.
- Wash your hands after use.
- Take off contaminated clothing and protective equipment before entering eating areas.

Precautions against fire and explosion

Product does not burn itself.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store only in the original container or a corrosion-resistant container. Store locked up.
Storage compatibility and limitations according to TRGS 510 must be observed.

7.3 Specific end uses

Observe product information sheet.
eCl@ss (8.0): 30-02-13-02

SECTION 8. Exposure controls / Personal protection

8.1 Control parameters

Does not contain substances fixing an occupational exposure limit.

8.2 Exposure controls / Personal protection equipment

Appropriate engineering controls

See section 7. No additional measures necessary.

Personal protection equipment

Respiratory protection:	not applicable
Hand protection:	Tested gloves with breakthrough time >= 8 hours made from NR 0.5 mm, CR 0.5 mm, NBR 0.35 mm, Butyl 0.5 mm, FKM 0.4 mm, PVC 0.5 mm
Eye protection:	use safety goggles
Protective clothing:	usual work clothes

General health and safety measures

Respect good personal hygiene. Do not drink, eat or smoke while handling.

Environmental exposure controls

See section 6 and 7.

Continued on next page

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Physical state:	liquid
Colour:	colourless
Odour:	mild
pH value (undiluted):	approx. 14
pH value (1 %):	approx. 12
Melting point/Freezing point (°C):	approx. -14
Boiling temperature (°C):	approx. 100
Flashpoint (°C):	not applicable
Flammability (solid, gas):	not applicable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Vapour pressure (hPa):	approx. 23
Relative vapor density:	not determined
Density (20 °C):	approx. 1.135
Solubility:	completely mixable with water
Partition coefficient (KOW):	not determined
Ignition temperature:	not determined
Decomposition temperature:	not determined
Dynamic viscosity (mPas):	< 10
Particle properties:	not applicable

9.2 Other information

Other safety characteristics

No other physical and chemical data has been recorded.

SECTION 10. Stability and Reactivity

10.1 Reactivity

Reacts with strong acids under intense heat development. Forms with ammonium salts hazardous gases and vapours (ammonia). May heat up during dilution.

10.2 Chemical stability

Stable under the specified storage conditions.

10.3 Possibility of hazardous reactions

There are expected no hazardous reactions for intended use.

10.4 Conditions to avoid

No hazardous conditions known. Note the information about handling and storage in section 7.

Continued on next page

10.5 Incompatible materials

Avoid contact with aluminum, magnesium, tin, zinc and other base metals (hydrogen gas formation possible). Attacks some types of glass, polyester (e.g. PET) and other plastics.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11. Toxicological information

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

Acute toxicity

Potassium hydroxide (45 %)
ATE oral = 1111 mg/kg body weight (literature)

Acute Toxicity Estimate of the mixture:
ATE mix (oral) > 2000 mg/kg body weight

Skin Corrosion / Irritation

Mixture is classified as corrosive to the skin.

Serious Eye Damage / Irritation

Mixture causes serious eye damage.

Sensitisation

Mixture does not contain any sensitising substances.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Mixture does not contain any substances which are classified as carcinogenic, mutagenic or toxic for reproduction.

Specific target organ toxicity (single exposure)

Mixture is not classified as specific target organ toxic (single exposure).

Specific target organ toxicity (repeated exposure)

Mixture does not contain any substances with specific target organ toxicity (repeated exposure).

Aspiration hazard

Not classified. Mixture does not contain any hydrocarbons.

11.2 Information on other hazards

Endocrine disrupting properties

This mixture does not contain any substances which are identified as endocrine disrupting.

Other information

No further data available.

Continued on next page

SECTION 12. Ecological information

The available data refer to the substances in the mixture. The mixture as a whole has not been tested.

12.1 Toxicity

This mixture does not contain any substances classified as dangerous for the environment.

12.2 Persistence and degradability

Potassium hydroxide (45 %)
Hydrolysis in water. Methods for determining the biological degradability are not applicable to inorganic substances.

Sodium metasilicate
Hydrolysis in water. Methods for determining the biological degradability are not applicable to inorganic substances.

The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

12.3 Bioaccumulative potential

Potassium hydroxide (45 %)
Not expected to bioaccumulate.

Sodium metasilicate
Not expected to bioaccumulate.

12.4 Mobility in soil

Potassium hydroxide (45 %)
No further relevant information available.

Sodium metasilicate
No further relevant information available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances which are identified as PBT or vPvB.

12.6 Endocrine disrupting properties

This mixture does not contain any substances which are identified as endocrine disrupting.

12.7 Other adverse effects

The mixture does not contain any substances which are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Recommendation

Cleaning concentrates should not be disposed of via wastewater. Hazardous waste according to European list of wastes. Dispose of in accordance with local, official regulations.

Waste codes/waste designations according to EWC

20 01 29 (detergents containing hazardous substances)

Continued on next page

Packaging

Contaminated package
Hazardous waste according to European list of wastes. Dispose of in accordance with local, official regulations. Waste code 15 01 10 (packaging containing residues of or contaminated by hazardous substances)

Cleaned package
Non contaminated and clean packagings can be used for recycling.

SECTION 14. Transport information

14.1 UN number or ID number
1814

14.2 UN Proper shipping name:

ADR / RID:
potassium hydroxide solution

IMDG-Code / ICAO-TI / IATA-DGR:
potassium hydroxide solution

14.3 Transport hazard class(es)

ADR / RID / IMDG-Code / ICAO-TI / IATA-DGR:
8

14.4 Packing group
II

14.5 Enviromental hazards
Not classified.

14.6 Special precautions for user
See section 6 and 8.

14.7 Maritime transport in bulk according to IMO instruments
not applicable

SECTION 15. Regulatory information

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

EU regulations
Subject to the Regulation (EC) No. 648/2004 on detergents.

National regulations
Observe employment restrictions for young people (§ 22 JArbSchG).
Water hazard class: WGK 1 (in accordance with German regulation AwSV)

Continued on next page

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment has not been carried out.

SECTION 16. Other information

Indication of changes

Revised sections: 2, 9, 11, 12

Hazard statements referred to in Section 2 and 3 i.a.w. Regulation (EC) No 1272/2008

Met. Corr. 1, H290 = Corrosive to metals, category 1, May be corrosive to metals.
Acute Tox. 4, H302 = Acute toxicity, category 4, Harmful if swallowed.
Skin Corr. 1A/B/C, H314 = Skin corrosion / irritation, category 1A/B/C, Causes severe skin burns and eye damage.
STOT SE 3, H335 = Specific target organ toxicity (single exposure), category 3, May cause respiratory irritation.

Key literature references and sources for data

REACH Regulation (EC) No. 1907/2006 last amended by Regulation (EU) 2016/2235
CLP Regulation (EC) No. 1272/2008 last amended by Regulation (EU) 2016/1179

All data were taken from the safety data sheets of our sub-suppliers, where available. Missing data were taken from the Substance Database GESTIS of the Institute for Occupational Safety and Health of the German statutory accident insurance or from the database of the European Chemicals Agency (ECHA).

Continued on next page

Legend

ABEK Filter designation
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE mix Acute Toxicity Estimates for mixtures
AVV European waste list regulation
AwSV Ordinance on systems for handling water-polluting substances
Butyl Butyl rubber
CAS (Registration number) Chemical Abstracts Service
CLP Regulation on classification, labelling and packaging of substances and mixtures
CMR Carcinogenicity, mutagenicity, reproductive toxicity
CR Chloroprene rubber
EC50 Median effective concentration
EG (Registration number) European Union
ErC50 Median effective concentration
FIFRA Federal Insecticide, Fungicide and Rodenticide Act
FKM Fluorocarbon rubber
GISCODE Labelling system of the professional associations in the construction industry
IATA-DGR International Air Transport Association - Dangerous Goods Regulations
IBC International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI Technical Instructions For The Safe Transport of Dangerous Goods by Air
IMDG International Maritime Dangerous Goods
LC50 Lethal concentration of a substance leading to the death of 50% of the exposed organisms
LD50 Lethal dose of a substance that leads to death of 50% of the organisms exposed to it
MARPOL International Convention for the Prevention of Pollution from Ships
NBR Acrylonitrile butadiene rubber
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
NR Natural rubber
OECD Organisation for Economic Co-operation and Development
PBT Persistent, bioaccumulating, toxic
PET Polyethylene terephthalate
PTFE Polytetrafluoroethylene
PVC Polyvinyl chloride
REACH Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID Convention concerning International Carriage by Rail
TRGS Technical Rules for Hazardous Substances
UN United Nations
US-EPA United States Environmental Protection Agency
VOC Volatile Organic Compounds
vPvB Very persistent, very bioaccumulating
WGK Water hazard class

Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal.