1. Identification of the Substance or Preparation and of the Company

- **Indications on the production: Battery fluid, alkaline**
- **Use of the product:** Battery liquid is necessary for the operation of alkaline NiCd accumulators

- **Manufacturer / Supplier:**
  GAZ Geräte- und Akkumulatorenwerk Zwickau GmbH
  P.O. Box 200457
  08004 Zwickau , Tel.: +49 375 86-0
  GERMANY

- **24 Hr. Emergency Assistance call: +49 / (0)700 24112112 (contact ID: GAZ)**
- **For USA deliveries: +49 / (0)700 24112112 (contact ID: GAZ)**
  + 1 872 5888 271 (contakt ID: GAZ)
-

2. Possible dangers:

GHS hazard identification

Signal word: "Danger"

Hazard warnings - H-phrases
H314 - Causes severe skin burns and eye damage
H302 - Harmful if swallowed
H290 - May be corrosive to metals.

Safety notes - P-phrases
P280 Wear protective gloves/protective clothing/eye protection/face protection
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.
P309+P311 If exposed or if you feel unwell: Immediately call a poison centre or doctor/physician.

Complete wording of H, P, -phrases see item 16

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3. Composition/indication on components

Chemical characterisation:
Aqueous solution

Dangerous ingredients:

Name	chem. formula	EINECS number	CAS number	Components . %	Classif. acc. to 67/548/EWG	Classif. acc. to 1272/2008/EG
Potassium hydroxide	KOH	215-181-3	1310-58-3	approx. 22	Xn; R22 C; R35	Met.Corr.1: H290 Acute Tox.4: H302 Skin Corr.1A : H314
Lithium hydroxide	LiOH	215-183-4	1310-65-2	approx. 0.7	see above	see above
Dest. water					not classified	

Complete wording of H, P, R, S-phrases see item 16.

4. First aid measures:

- **General notes:**
  Immediately remove clothes contaminated with battery liquid
- **After inhalation:**
  Fresh air or oxygen supply; seek medical aid.
- **After skin contact:**
  Immediately wash with plenty of water.
  Seek medical attention.
- **After eye contact:**
  Rinse the open eyes immediately with plenty of water for at least 10 minutes.
  After that, immediately seek medical advice (eye specialist).
- **After ingestion:**
  Rinse mouth and drink plenty of water.
  Do not induce vomiting, seek medical advice immediately.

5. Fire fighting measures

5.1 Suitable extinguishing media:
Use fire fighting measures that suit the environment.

5.2 Special dangers
inflammable

5.3 Special protective equipment
Protective suit, independent respiratory protection

6. Accidental release measures

Avoid substance contact.
Rinse spilled electrolyte with plenty of water. Prevent the danger of skidding.
Contain bigger amounts and pump into containers; absorb the rest with absorbent material and dispose of properly. Rinse smaller amounts with water. Dispose of waste water properly.

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7. Handling and storage

Provide a good ventilation of the working room.
Provide an alkaline-resistant floor covering.
Open and handle the container with care.
Provide washing facilities or eye washes.
Store in a dry place

8. Exposure controls / personal protection

Components with critical values that require monitoring at the workplace: Not required
General protection and hygienical measures/personal protection equipment:
Immediately remove contaminated, soaked clothes.
Wash hands before breaks and end of work.
Avoid contact to skin and eyes.
During work always wear safety glasses and protective gloves (nitrile rubber).

9. Physical properties

- General indications

Form:	liquid
Colour:	colourless
- Melting point/melting range:	not applicable
- Boiling point/boiling range:	approx. 106 °C
- Flash point/melting range:	not applicable
- Flammability:	The substance is not flammable
- Danger of explosion:	not explosive
- Density at 20°C:	1.20 g/cm³
- Solubility in water:	not applicable
- pH value at 20°C:	~ 14

10. Stability and reactivity:

10.1 Conditions to be avoided
No relevant information available

10.2 Materials to be avoided
Light metals, hydrocarbons, acids, halogens, phosphor, alkaline earth metals, non-metallic oxides

10.3 Dangerous decomposition products
No dangerous decomposition products known

11. Information on toxicology:

Potassium hydroxide	LD50 / oral / rat:	273 mg/kg
Lithium hydroxide	LD50 / oral / rat:	210 mg/kg

Primary irritant effect:
On the skin: Strong caustic effect on skin and mucous membranes.
In the eye: Conjunctive burns
After inhalation: Chemical injury of mucous membranes, cough, shortness of breath, pulmonary oedema

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12. Information on ecology:

- **Indications on elimination (persistence and degradability):**
  Potassium hydroxide is degraded by reaction with the carbon monoxide in the air.
- **Behaviour in environmental compartments:**
  Potassium hydroxide is water-soluble. It has only a reduced bio-accumulation potential. Mobility in soils: high
  Liquid with low volatility.
- **Ecotoxic effect:** Can be harmful to vegetation.
  Aquatic toxicity:
  Harmful to fish
  pH values ≥ 10.5 can kill fish and other aquatic organisms.
  Causes severe damage to aquatic plants.
  High concentrations have severe harmful effects on sewage treatment plants.
- **General notes:**
  Do not allow to run into surface waters, waste water, or soil.
  Water hazard class 1 (self-classification): Slightly water hazardous

13. Note on disposal:

Product:
Recommendation:
The product must be disposed off according to the corresponding national regulations

Uncleaned packaging:
Recommendation:
Disposal according to the national regulations
Packages which cannot be cleaned are to be disposed off in the same manner as the product.

14. Transport regulations:

- **Land transport ADR / RID and GGVS / GGVE (cross-border / inland):**
- **ADR / RID – GGVS / E class** 8
- **Kemler number:** 80
- **UN number:** 2797
- **Denomination of the goods:** Battery fluid, alkaline

- **Marine transport IMDG / GGVSee:**
- **IMDG / GGVSee class:** 8
- **UN number:** 2797
- **Packing group:** II.
- **EMS number:** F–A , S-B
- **Correct technical name:** Battery fluid, alkaline

- **Air transport ICAO – TI and IATA – DGR:**
- **ICAO / IATA class:** 8
- **UN /ID number:** 2797.
- **Packing group:** II.
- **Correct technical name:** Battery fluid, alkaline

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15. Regulations:

- **National regulations:** VwVwS, German Regulation on Substances Hazardous to Water
- **Classification according to regulation for industrial safety:**
- **Water hazard class:** WGK 1 (list classification): Slightly water hazardous.

16. Miscellaneous indications:

Complete wording of H, P, R, S-phrases

H290 May be corrosive to metals.
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection
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.
P309+P311 If exposed or if you feel unwell: Immediately call a poison centre or doctor/physician.
P303+P361+P353 If on skin: Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.

The specifications rest on the today's stand of our knowledge, they show in particular no assurance of product features and justify no contractual legal relationship.