

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.01.2018

Revision: 15.01.2018


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

- **Product identifier**
- **Trade name:** positive developer
- **Article number:** 72110
- **CAS Number:**
1310-73-2
- **EINECS Number:**
215-185-5
- **Index number:**
011-002-00-6
- **REACH-Registration number** 01-2119457892-27
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Basic chemical (without special defined application)
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bungard Elektronik GmbH & Co. KG
Rilkestraße 1
D - 51570 Windeck Tel.: +49/2292/5036
- **Informing department:**
Product safety department. Tel.: +49/2292/5036
E-mail: info@bungard.de
- **Emergency telephone number:**
Poison Control Center, Mainz
Tel. 00 49 / 61 31 / 19 240

* 2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.

 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
C; Corrosive
R35: Causes severe burns.
 - **Classification system:**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

 - **Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
 - **Hazard pictograms**
- 

GHS05
- **Signal word** Danger
 - **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

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- Precautionary statements

- 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.*
- P310 Immediately call a POISON CENTER or doctor/physician.
- P405 Store locked up.
- P406 Store in corrosive resistant container with a resistant inner liner.

- Other hazards**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Substances sodium hydroxide NaOH
- **CAS No. Designation:**
1310-73-2 sodium hydroxide
- **Identification no(s):**
- **EINECS no.:** 215-185-5
- **Index number:** 011-002-00-6

4 First aid measures

- **Description of first aid measures**
- **General advice:** Instantly remove any clothing soiled by the product.
- **After inhalation**
After inhaling the product-dust, breathe in plenty of fresh air.
Consult a doctor.
- **After skin contact**
Remove contaminated clothing immediately. Wash affected areas with plenty of water und soap. If irritation continues, contact a doctor.
- **After eye contact** Rinse immediately opened eye for several minutes under running water. Then consult doctor.
- **After swallowing** Do not induce vomiting. Drink water in small gulps. Summon a doctor immediately.
- **Information for doctor** Risk of stomach perforation

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Product is non-flammable. Use fire fighting measure that suit the surroundings.
- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture**
Reacts in solutions with aluminium, zinc, tin and alloys of these metals, releasing hydrogen gas, which when combined with air, forms an explosive mixture.
Attention! Violent reaction with water. Considerable heating occurs.
- **Advice for firefighters**
- **Protective equipment:** Adjust protective clothing to surrounding fire.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid causing dust.
- **Environmental precautions:**
Prevent material from reaching sewage system, holes and cellars.
If large amounts are released, the authorities must be informed.
- **Methods and material for containment and cleaning up:**
Pick up mechanically and rinse the remainder with water. Avoid dust development. Place in suitable container and send to be recycled or disposed (taking item 13 into account).
- **Reference to other sections**
See Section 8 for information on personal protection equipment.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Provide suction extractors if dust is formed.
Wear breathing protection when decanting larger quantities without extractor facilities.
When diluting, always stir the product into standing water.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe official regulations on storage and handling of water hazardous substances
Keep container tightly closed and dry
Provide alkali-resistant floor.
Not to be kept in containers made of aluminium, zinc, tin or alloys of those metals.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Store under dry conditions.
This product is hygroscopic.
- **Storage class 8 B S (VCI - Konzept, 2007)**

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** In case of dust development, suction is needed.
- **Control parameters**

- **Components with critical values that require monitoring at the workplace:**

1310-73-2 sodium hydroxide (50-100%)

WEL Short-term value: 2 mg/m³

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.

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Avoid contact with the eyes and skin.

Do not inhale dust. Prevent formation of dust.

-Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

-Recommended filter device for short term use:

Filter P2

Take care of limitations and rules for the use of breathing protection equipment (BGR 190).

-Protection of hands:

Protective gloves.

Only use chemical-protective gloves with CE-labelling of category III.

-Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

Natural rubber, NR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

-Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

-Eye protection: Tightly sealed safety glasses.**-Body protection:**

Standard protective working clothes, chemical resistant safety-shoes or wellingtons. If skin contact is possible, wear impenetrable protective clothing.

9 Physical and chemical properties

- Information on basic physical and chemical properties**- General Information****- Appearance:****Form:** Solid.**Colour:** White**- Smell:** Odourless**- pH-value (100 g/l) at 20°C:** > 14**- Change in condition****Melting point/Melting range:** 319°C**Boiling point/Boiling range:** 1390°C**- Flash point:** Product is non-flammable nor potentially explosive**- Density at 20°C** 2.13 g/cm³**- Settled apparent density at 20°C** 1100-1200 kg/m³**- Solubility in / Miscibility with****Water at 20°C:** 1090 g/l**- Other information****molecular weight (weight average/Mw):** 40 g/mol

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10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Violent reaction with water at high temperatures
 - Diluting or dissolving in water always causes rapid heating
 - Strong exothermic reaction with acids
 - Reacts with light alloys in the presence of moisture to form hydrogen
- **Incompatible materials:** Light metals, acids, ammonium compounds.
- **Hazardous decomposition products:**
 - Formation of hydrogen in case of reactions with aluminium or light metal alloys.
 - Formation of ammonia in case of reaction with ammonium compounds.
- **Additional information:**
 - The product reacts with carbon dioxide out of the air forming sodium carbonate and sodium hydrogen carbonate.
 - The product is hygroscopic.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|---|------|------------------|
| - LD/LC50 values that are relevant for classification: | | |
| Oral | LD50 | 2000 mg/kg (rat) |
- **Primary irritant effect:**
 - **on the skin:** Strong caustic effect on skin and mucous membranes.
 - **on the eye:**
 - Strong caustic effect.
 - Danger of loss of sight is possible.
 - **Sensitization:** No sensitizing effect known.
 - **Additional toxicological information:**
 - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Type of test Effective concentration Method Assessment** *Leuciscus idus* 133 mg/l LC50 (48 h)
- **Persistence and degradability** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Harmful effect on fish, plankton and other waterorganism by pH shift possible.
 - **Behaviour in sewage processing plants:** None bacterial inhibition after neutralisation..
 - **Remark:** On proper use no troubles in clarification plants.
- **Additional ecological information:**
 - Does not cause any biological oxygen consumption. After neutralization, the toxicity is reduced. Toxic effects refer to pH-values below pH<6 or above pH>9.
- **General notes:**
 - Do not allow to enter drainage system, surface or ground water.
 - Water hazard class 1 (Assessment by list): slightly hazardous for water.

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- Results of PBT and vPvB assessment

- **PBT:** Not applicable.- **vPvB:** Not applicable.

13 Disposal considerations

- Waste treatment methods

The following advice is related to new material and not to any processed products. In case of a mixture with other products other disposal methods may become necessary. If in doubt seek advice from product supplier or from local authorities.

- Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

A used product should be recycled or used in other contexts, otherwise be handed over to an appropriate disposal, e.g. neutralisation.

- Waste disposal key number:

Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

- Uncleaned packagings:

- **Recommendation:** After complete emptying and cleaning, send to be reconditioned or recycled.

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

*14 Transport information

- Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

- **ADR/RID-GGVS/E Class:** 8 (C6) Corrosive substances.

- **Kemler Number:** 80

- **UN-Number:** 1823

- **Packaging group:** II

- **Label** 8

- **UN proper shipping name:** 1823 SODIUM HYDROXIDE, SOLID

- Maritime transport IMDG/GGVSea:

- **IMDG/GGVSea Class:** 8

- **UN Number:** 1823

- **Label** 8

- **Packaging group:** II

- **EMS Number:** F-A,S-B

- **Correct technical name:** SODIUM HYDROXIDE, SOLID

- Air transport ICAO-TI and IATA-DGR:

- **ICAO/IATA Class:** 8

- **UN/ID Number:** 1823

- **Label** 8

- **Packaging group:** II

- **Correct technical name:** SODIUM HYDROXIDE, SOLID

- **UN "Model Regulation":** UN1823, SODIUM HYDROXIDE, SOLID, 8, II

- **Special precautions for user** Warning: Corrosive substances.

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Water hazard class:**
Water hazard class 1 (self assessment according to German VwVwS (Regulations for water-hazardous substances): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:** see item 1: Informing departement
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- *** Data compared to the previous version altered.**