



AZ 400 K Developer

Substance No.: SXR084862
Version 54

Revision Date 14.03.2013

Print Date 18.04.2013

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

1.1 Product identifier

Trade name : AZ 400 K Developer

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

Use of the Substance/Mixture : Electronic industry
Intermediate for electronic industry

1.3 Details of the supplier of the safety data sheet

Company : AZ Electronic Materials (Germany) GmbH
Rheingaustrasse 190-196 ,
65203 Wiesbaden Germany

Telephone : +49 (0)611 962 8563
E-mail address : PSE@az-em.com

Responsible/issuing person : Product Safety:
+49(0)6126-229248 or +49(0)6126-227340

1.4 Emergency telephone number

Emergency telephone number : +49 69 305 6418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

GHS Classification

Corrosive to metals, Category 1 H290: May be corrosive to metals.
Skin corrosion, Category 1B H314: Causes severe skin burns and eye damage.

Classification (67/548/EEC, 1999/45/EC)

Corrosive R34: Causes burns.

2.2 Label elements

GHS-Labeling



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Symbol(s)

:



Signal word

: Danger

Hazard statements

: H290
H314

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

Precautionary statements

: **Prevention:**
P280

Wear protective gloves/ protective clothing/
eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do
NOT induce vomiting.

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.

P308 + P313 IF exposed or concerned: Get medical
advice/ attention.

Hazardous components which must be listed on the label:

- 1310-58-3 potassium hydroxide

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical characterization

An aqueous alkaline preparation.

Hazardous components

dipotassium tetraborate

CAS-No. : 1332-77-0
EC-No. : 215-575-5
Classification(67/548/EEC) : T; Repr.Cat.2; R60-R61

Classification : Repr. 1B; H360FD
(REGULATION (EC) No



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1272/2008)
Concentration [%] : $\geq 3 - < 5,2$

potassium hydroxide
CAS-No. : 1310-58-3
EC-No. : 215-181-3
Registration number : 01-2119487136-33-xxxx
Classification(67/548/EEC) : C; R35
Xn; R22

Classification : Met. Corr. 1; H290
(REGULATION (EC) No Acute Tox. 4; H302
1272/2008) Skin Corr. 1A; H314

Concentration [%] : $\geq 2 - < 5$

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Remove soiled or soaked clothing immediately
If someone exposed to the product feels unwell, contact a doctor and show this safety data sheet.
Adhere to personal protective measures when giving first aid

Inhalation : Remove the casualty into fresh air and keep him calm.
Call in a physician immediately and show him the Safety Data Sheet.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Call in a physician immediately and show him the Safety Data Sheet.

Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Remove contact lenses.

Ingestion : Do not induce vomiting.
Call in a physician immediately and show him the Safety Data Sheet.
Let plenty of water be drunk in small gulps.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.



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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : compatible with all usual extinguishing media

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : No information available.

5.3 Advice for firefighters

Special protective equipment for firefighters : Well closed full protective clothing (coat and pants) including helmet.
Wear self contained breathing apparatus for fire fighting if necessary.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : See: Exposure controls and personal protection.

6.2 Environmental precautions

Environmental precautions : Do not allow entry to drains, water courses or soil

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Rinse off with lots of water, in required by addition of citric acid, observe pH-value.

6.4 Reference to other sections

Additional advice : Information regarding Safe handling, see chapter 7.
Information regarding personal protective measures see, chapter 8.
Information regarding Waste Disposal, see chapter 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling



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Advice on safe handling : Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion : Observe the general rules of industrial fire protection

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep only in the original container

Further information on storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place.
Protect from frost, heat and sunlight.

Advice on common storage : Do not store or transport together with foodstuffs

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

DNEL
potassium hydroxide : End Use: Industrial use
Exposure routes: Inhalation
Potential health effects: Local effects
Value: 1 mg/m³

8.2 Exposure controls

Engineering measures

See chapter 7; no measures exceeding the ones mentioned are necessary.

Personal protective equipment

Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure

Hand protection : Break through time: > 10 min
Glove thickness: > 0,4 mm
For short-term exposure (splash protection):
Nitrile rubber gloves.
Remarks: These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness

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and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Protective suit

Hygiene measures : When using do not eat, drink or smoke.
Keep away from food and drink.
Wash hands before breaks and at the end of workday.
Use barrier skin cream.

Protective measures : Do not inhale vapours
Avoid contact with eyes and skin
Observe the usual precautions for handling chemicals.

Environmental exposure controls

General advice : Do not allow entry to drains, water courses or soil

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Form : Liquid
Colour : colourless
Odour : odourless

Safety data

Flash point : Not applicable
Ignition temperature : not determined
Thermal decomposition : not determined
Lower explosion limit : not determined
Upper explosion limit : not determined
Flammability (solid, gas) : not determined
Oxidizing properties : not determined
Auto-ignition temperature : not determined
Burning number : not determined
pH : approx. 13 (20 °C)
Freezing point : not determined
Boiling temperature : approx. 100 °C
Sublimation point : not determined
Vapour pressure : approx. 23 hPa, 20 °C
Density : approx. 1,1 g/cm³, 20 °C

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Water solubility	: miscible in all proportions
Partition coefficient: n-octanol/water	: not determined
Solubility in other solvents	: not determined
Viscosity, dynamic	: approx. 1 mPas, 20 °C
Viscosity, kinematic	: not determined
Relative vapour density	: not determined
Corrosive in contact with metals	: 439 mm/a Corrosive to metals
Evaporation rate	: not determined

9.2 Other information

Further information : Remarks: Corrosive effect on aluminium.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : When handled and stored appropriately no dangerous reactions are known

10.4 Conditions to avoid

Conditions to avoid : no data available

10.5 Incompatible materials

Materials to avoid : Acids

10.6 Hazardous decomposition products

Hazardous decomposition products : when handled and stored appropriately no dangerous decomposition products are known

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product

Acute oral toxicity : Acute Toxicity Estimate (ATE): 20.242,91 mg/kg, Calculation



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method

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitisation : no data available

Components:

potassium hydroxide :

Acute oral toxicity : LD50: 333 mg/kg, rat

Skin corrosion/irritation : Result: Corrosive

Serious eye damage/eye irritation : Result: corrosive, Classification: Corrosive

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to bacteria : no data available

Components:

potassium hydroxide :

Toxicity to daphnia and other aquatic invertebrates : LC50: 80 mg/l, 24 h

12.2 Persistence and degradability

Product:

Biodegradability : no data available

Components:

potassium hydroxide :



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Biodegradability : Result: sparingly degradable

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects

Product:

Additional ecological information : Do not allow to enter soil, waterways or waste water

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14: Transport information

ADR

UN number : 1814
Description of the goods : POTASSIUM HYDROXIDE SOLUTION
Environmentally hazardous : no

IATA

UN number : 1814
Description of the goods : Potassium hydroxide solution
Class : 8
Packing group : II
Labels : 8
Environmentally hazardous : no

IMDG

UN number : 1814
Description of the goods : POTASSIUM HYDROXIDE SOLUTION
Class : 8
Packing group : II
Labels : 8

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EmS Number 1 : F-A
EmS Number 2 : S-B
Marine pollutant : no

RID

UN number : 1814
Description of the goods : POTASSIUM HYDROXIDE SOLUTION
Environmentally hazardous : no

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

: Neither banned nor restricted

Candidate List of Substances of Very High Concern for Authorisation

: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

EU. REACH - Annex XIV: List of substances subject to authorisation

: Neither banned nor restricted

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

R22 Harmful if swallowed.
R34 Causes burns.
R35 Causes severe burns.
R60 May impair fertility.
R61 May cause harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360FD May damage fertility. May damage the unborn child.

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm³)



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Further information

Further information : Observe national and local legal requirements

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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