

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.05.2014

Version 1

Revision: 06.05.2014

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

- **1.1 Product identifier**

- **Trade name: ADOX APH 09**

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

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

- **Application of the substance / the mixture**

Photochemicals
Photographic activities
Consumer use
Photographic developer

- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

ADOX Fotowerke GmbH
Pieskower Str. 30 A
D-15526 Bad Saarow
Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
<http://www.adox.de>

- **Informing department:**

Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
E-mail: info@adox.de

- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

2 Hazards identification

- **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



GHS08

Muta. 2 H341 Suspected of causing genetic defects.



GHS05

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS09

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



Xn; Harmful

R68: Possible risk of irreversible effects.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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- **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.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS05 GHS08 GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**

potassium hydroxide

4-aminophenol

- **Hazard statements**

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves / eye protection.

P201 Obtain special instructions before use.

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.

P391 Collect spillage.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 123-30-8 EINECS: 204-616-2	4-aminophenol Xn R20/22-68 N R50/53 Muta. Cat. 3 ----- Muta. 2, H341 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Acute Tox. 4, H332	2.0-5.0%
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CAS: 1310-58-3 EINECS: 215-181-3 Reg.nr.: 01-2119487136-33-XXXX	potassium hydroxide  C R35  Xn R22 -----  Skin Corr. 1A, H314  Acute Tox. 4, H302	2.0-5.0%
CAS: 7440-66-6 EINECS: 231-175-3	zinc powder -zinc dust (pyrophoric)  F R15-17  N R50/53 -----  Pyr. Sol. 1, H250; Water-react. 1, H260  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 0.5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water (> 15 min). Then consult doctor.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
- **4.2 Most important symptoms and effects, both acute and delayed**
No known symptoms to date.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
sulphur dioxide (SO₂)
Carbon monoxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** The product is not flammable

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to enter drainage system, surface or ground water.
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

- **6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and storage

- **7.1 Precautions for safe handling**

No special precautions necessary if used correctly.
Keep away from heat and direct sunlight.
Keep out of the reach of children.

- **Information about protection against explosions and fires:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and containers:** Keep container tightly sealed.

- **Information about storage in one common storage facility:**

Keep away from foodstuffs, beverages and food.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed containers.
Store in a cool place.

- **Storage class**

LGK 8 B

(German Technical Rule for Hazardous Substance – TRGS 510)

- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **8.1 Control parameters**

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

1310-58-3 potassium hydroxide

WEL	Short-term value: 2 mg/m ³
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.

- **Breathing equipment:** Not required.

- **Protection of hands:**

Protective gloves.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

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

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

- **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

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

- **Body protection:** Protective work clothing.

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Dark brown
	Clear
· Odour:	Not characteristic

- **pH-value at 20 °C:** 11.8

- **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: 100 °C

- **Flash point:** Not applicable

- **Self-inflammability:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive.

- **Vapour pressure at 20 °C:** 23 hPa

- **Density at 20 °C** 1.36 g/cm³

- **Solubility in / Miscibility with**

Water: miscible

- **Viscosity:**

dynamic: Not determined

kinematic: Not determined

- **Solvent content:**

Organic solvents: 0.0 %

- **9.2 Other information**

No further relevant information available.

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10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids
Reacts with acids releasing sulphur dioxide
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

123-30-8 4-aminophenol

Oral	LD50	375 mg/kg (rat)
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1310-58-3 potassium hydroxide

Oral	LD50	365 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effect known.
- **Subacute to chronic toxicity:** Possible risk of irreversible effects.
- **Additional toxicological information:**
This statement was deduced from the properties of the single components.
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Muta. 2

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Not determined
- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
POTASSIUM HYDROXIDE
Toxicity to Fish (LC50): Gambusia affinis 80 mg/l 96 h, Poecilia reticulata 165 mg/l 24 h
4-AMINOPHENOL
LC50 fish (96h) 1,2mg/l
EC50 crustaceans (48h) 0,24 mg/l

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- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
The product does not contain organically bounded halogens (AOX-free).
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations




- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated under adherence to official regulations.

- **European waste catalogue**

09 01 01*	water-based developer and activator solutions
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- **Uncleaned packagings:**
- **Recommendation:**
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

- | | |
|---|------------------------------|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN 1814 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, IMDG, IATA | POTASSIUM HYDROXIDE SOLUTION |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG | |
|   | |
| <ul style="list-style-type: none"> · Class · Label | 8 Corrosive substances.
8 |
| <ul style="list-style-type: none"> · IATA | |
|  | |
| <ul style="list-style-type: none"> · Class | 8 Corrosive substances. |

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· Label	8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: 4-aminophenol Yes Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Kehler Number: · EMS Number: · Segregation groups	Warning: Corrosive substances. 80 F-A,S-B 18 - Alkalis
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code · Remarks:	5 l 3 E "Limited quantity" according to chapter 3.4 ADR, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.
· IMDG · Remarks:	"Limited quantity" according to chapter 3.4 IMDG, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.
· IATA · Remarks:	Packing Instruction PAX 852, CAO 856
· UN "Model Regulation":	UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, III

15 Regulatory information

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

· National regulations

Class	Share in %
I	4.2

· Water hazard class: Water danger class 3 (Self-assessment): highly water-endangering.

· 15.2 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.

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· Relevant phrases

- H250 Catches fire spontaneously if exposed to air.
- H260 In contact with water releases flammable gases which may ignite spontaneously.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.
- H341 Suspected of causing genetic defects.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- R15 Contact with water liberates extremely flammable gases.
- R17 Spontaneously flammable in air.
- R20/22 Harmful by inhalation and if swallowed.
- R22 Harmful if swallowed.
- R35 Causes severe burns.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R68 Possible risk of irreversible effects.

· Abbreviations and acronyms:

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- 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)
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
- Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Muta. 2: Germ cell mutagenicity, Hazard Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· Sources

applicable EEC directives:

- 1999/45
- 1907/2006
- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>