

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.06.2014

version no: 1

Revision: 19.06.2014

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

. 1.1 Product identifier

. Trade name: ADOX ADOTOL Liquid WA

. Article number: 105103

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

No further relevant information available.

. Application of the substance / the mixture Developer for photographic use

. 1.3 Details of the supplier of the safety data sheet

. Manufacturer/Supplier:

ADOX Fotowerke GmbH
Pieskower Str. 30 A
15526 Bad Saarow / Germany
www.adox.de

. Further information obtainable from: ADOX: +49 (0) 33631 6459-0 E-mail: info@adox.de

. 1.4 Emergency telephone number: Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

SECTION 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.

Carc. 2 H351 Suspected of causing cancer.



GHS05

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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



Xn; Harmful

R40-68: Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.



Xi; Irritant

R36: Irritating to eyes.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

. 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 according to the latest editions of the EU-lists, and extended by company and literature data.

. 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



GHS07



GHS08

. Signal word Danger
. Hazard-determining components of labelling:

tetrasodium ethylene diaminetetraacetate
hydroquinone (1,4-dihydroxybenzene)

. Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.

. Precautionary statements

P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local regulations.

. 2.3 Other hazards
. Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

. 3.2 Chemical characterization: Mixtures

. **Description:** Mixture of substances listed below and with nonhazardous additions.

. Dangerous components:

CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36	potassium carbonate ☒ Xi R36/38 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-<25%
CAS: 64-02-8 EINECS: 200-573-9 Index number: 607-428-00-2	tetrasodium ethylene diaminetetraacetate ☒ Xn R22; ☒ Xi R41 ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	3-5%
CAS: 123-31-9 EINECS: 204-617-8 Index number: 604-005-00-4 Reg.nr.: 01-2119524016-51	hydroquinone (1,4-dihydroxybenzene) ☒ Xn R22-40-68; ☒ Xi R41; ☒ Xi R43; ☒ N R50 Carc. Cat. 3, Muta. Cat. 3 ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	1- <2.5%

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

SECTION 4: First aid measures

- . **4.1 Description of first aid measures**
- . **General information:** Immediately remove any clothing/shoes soiled by the product.
- . **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- . **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- . **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- . **After swallowing:** Rinse out mouth and then drink plenty of water.
- . **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- . **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture**
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- . **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- . **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- . **Information about fire - and explosion protection:** Protect from heat.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- . **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.

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- . **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
 - Store under lock and key and out of the reach of children.
 - Recommended storage temperature: 5-25 °C
 - Protect from exposure to the light.
- . **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

. 8.1 Control parameters

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

123-31-9 hydroquinone (1,4-dihydroxybenzene) (1- <3%)

WEL	Long-term value: 0.5 mg/m ³
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- . **Additional information:** The lists valid during the making were used as basis.

. 8.2 Exposure controls

. Personal protective equipment:

. General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

- . **Respiratory protection:** Ensure adequate ventilation

. Protection of hands:



Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

. Material of gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

. Penetration time of glove material

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

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

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. Eye protection:



Tightly sealed goggles

. Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

. 9.1 Information on basic physical and chemical properties

. General Information

. Appearance:

. Form:	Fluid
. Colour:	Colourless
. Odour:	Pungent
. Odour threshold:	Not determined.

. pH-value: Alkaline

. Change in condition

. Melting point/Melting range:	Undetermined.
. Boiling point/Boiling range:	>100 °C

. Flash point: Not applicable.

. Flammability (solid, gaseous): Not applicable.

. Ignition temperature:

. Decomposition temperature: Not determined.

. Self-igniting: Product is not selfigniting.

. Danger of explosion: Product does not present an explosion hazard.

. Explosion limits:

. Lower:	Not determined.
. Upper:	Not determined.

. Vapour pressure at 20 °C: 23 hPa

. Density at 20 °C:	1.375 g/cm ³
. Relative density	Not determined.
. Vapour density	Not determined.
. Evaporation rate	Not determined.

. Solubility in / Miscibility with water: Fully miscible.

. Partition coefficient (n-octanol/water): Not determined.

. Viscosity:

. Dynamic:	Not determined.
. Kinematic:	Not determined.

. Solvent content:

. Organic solvents:	0.0 %
. Water:	>60 %

. 9.2 Other information: No further relevant information available.

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SECTION 10: Stability and reactivity

- . 10.1 Reactivity
- . 10.2 Chemical stability
- . **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- . 10.3 Possibility of hazardous reactions Reacts with acids, alkalis and oxidizing agents.
- . 10.4 Conditions to avoid No further relevant information available.
- . 10.5 Incompatible materials: Under certain fire conditions, traces of other toxic gases cannot be excluded.
- . 10.6 Hazardous decomposition products: Irritant gases/vapours

SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects
 - . Acute toxicity:
- | | |
|---|----------------------|
| . LD/LC50 values relevant for classification: | |
| 123-31-9 hydroquinone (1,4-dihydroxybenzene) | |
| Oral | LD50 320 mg/kg (rat) |
- . Primary irritant effect:
 - . **on the skin:** Irritant to skin and mucous membranes.
 - . **on the eye:** Strong irritant with the danger of severe eye injury.
 - . **Sensitization:** Sensitization possible through skin contact.
 - . **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
 - . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 2

SECTION 12: Ecological information

- . 12.1 Toxicity
- | | |
|--|--|
| . Aquatic toxicity: | |
| 123-31-9 hydroquinone (1,4-dihydroxybenzene) | |
| EC50 | 48h: 0.29 mg/l (daphnia magna (Großer Wasserfloh)) |
| LC50 | 96h: 0.044 mg/l (Pimephales promelas) |
- . 12.2 Persistence and degradability No further relevant information available.
 - . 12.3 Bioaccumulative potential No further relevant information available.
 - . 12.4 Mobility in soil No further relevant information available.
 - . **Additional ecological information:**
 - . **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
 - . 12.5 Results of PBT and vPvB assessment
 - . **PBT:** Not applicable.
 - . **vPvB:** Not applicable.
 - . 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- . 13.1 Waste treatment methods
- . **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

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