

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011


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

- **Product identifier**
- **Trade name: ADOX ADOTOL Konstant Teil 1**
- **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 preparation**
Photochemicals
Photographic activities
Consumer use
Photographic developer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
FOTOIMPEX GmbH
Pieskower Str. 30 A
D-15526 Bad Saarow
Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
<http://www.fotoimpex.de>
- **Informing department:**
Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
E-mail: info@fotoimpex.de
- **Emergency telephone number:** Tel.: 0700-24112112 (CAL)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
GHS07 exclamation mark
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xi; Irritant
R36: Irritating to eyes.
- **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.
- **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 EU guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- **Code letter and hazard designation of product:**
 Xi Irritant
- **Risk phrases:**
36 Irritating to eyes.
- **Safety phrases:**
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 1

(Contd. of page 1)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 497-19-8	sodium carbonate	 Xi R36	25-50%
EINECS: 207-838-8		 Eye Irrit. 2, H319	

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

4 First aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air.
- **After skin contact** The product is not skin irritating.
- **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.
In case of persistent symptoms consult doctor.

5 Firefighting measures

- **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.
- **Special hazards arising from the substance or mixture**
Can be released in case of fire
sulphur dioxide (SO₂)
Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:**
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
- **Reference to other sections**
No dangerous materials are released.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 1

(Contd. of page 2)

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

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:**
No special measures required.
The product is not flammable
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **Storage class** LGK 13

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- **Material of gloves** Synthetic gloves
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Synthetic gloves

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 1

(Contd. of page 3)

Value for permeation: Level:

≥ 3 (60 min)

- **Not suitable are gloves made of the following materials:** Natural rubber, NR
- **Eye protection:** Safety glasses

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Solid.
· Colour:	Whitish
· Odour:	Odourless

· **pH-value (60 g/l) at 20 °C:** ca. 11.0

· Change in condition

· **Melting point/Melting range:** > 150 °C

· **Boiling point/Boiling range:** Not determined

· **Flash point:** Not applicable

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

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

· **Density** Not determined

· Solubility in / Miscibility with

· **Water:** Partly soluble

· Solvent content:

· **Solids content:** 100.0 %

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **Possibility of hazardous reactions** Reacts with acids releasing sulphur dioxide

· **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· Primary irritant effect:

· **on the skin:** No irritant effect.

· **on the eye:** No irritant effect.

· **Sensitization:** No sensitizing effect known.

· Additional toxicological information:

This statement was deduced from the properties of the single components.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 1

(Contd. of page 4)

The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Not determined
- **Persistence and degradability** Not determined
- **Behaviour in environmental systems:** Not determined
- **Bioaccumulative potential** Not determined
- **Ecotoxic effects:** Not determined
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**
At present there are no ecotoxicological assessments.
Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.
According to the criteria of the EU-classification and labelling "dangerous for environment"(1999/45/EG) the substance/ the product has to be classified as non-hazardous for the environment.
The product does not contain organically bounded halogens (AOX-free).
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

13 Disposal considerations

- **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 |
|----------|---|
- **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

- **Land transport ADR/RID (cross-border)**
- **ADR/RID-GGVS/E Class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 1

(Contd. of page 5)

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -
- **Special precautions for user** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): weakly water-endangering.
- **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.

- **Relevant phrases**

H319 Causes serious eye irritation.

R36 Irritating to eyes.

- **Contact:** Phon: ++49 39291 4250

- **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

- **Sources**

applicable EEC directives:

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>

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

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

- **Product identifier**
- **Trade name: ADOX ADOTOL Konstant Teil 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 preparation**
Photochemicals
Photographic activities
Consumer use
Photographic developer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
FOTOIMPEX GmbH
Pieskower Str. 30 A
D-15526 Bad Saarow
Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
<http://www.fotoimpex.de>
- **Informing department:**
Tel.: +49 (0)33631 6459-0
Fax: +49 (0)33631 6459-190
E-mail: info@fotoimpex.de
- **Emergency telephone number:** Tel.: 0700-24112112 (CAL)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
GHS08 health hazard
Muta. 2 H341 Suspected of causing genetic defects.
Carc. 2 H351 Suspected of causing cancer.

GHS05 corrosion
Eye Dam. 1 H318 Causes serious eye damage.

GHS09 environment
Aquatic Acute 1 H400 Very toxic to aquatic life.

GHS07 exclamation mark
Acute Tox. 4 H302 Harmful if swallowed.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R22-40-68: Harmful if swallowed. Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.

Xi; Irritant
R41: Risk of serious damage to eyes.

Xi; Sensitising
R43: May cause sensitisation by skin contact.

N; Dangerous for the environment
R50: Very toxic to aquatic organisms.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 1)

- **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.
- **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 EU guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- **Code letter and hazard designation of product:**



Xn Harmful
N Dangerous for the environment

- **Hazard-determining components of labelling:**
1,4-dihydroxybenzene (hydroquinone)
- **Risk phrases:**
22 Harmful if swallowed.
40 Limited evidence of a carcinogenic effect.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.
50 Very toxic to aquatic organisms.
68 Possible risk of irreversible effects.
- **Safety phrases:**
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.
- **Dangerous components:**

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31













Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 2)

CAS: 123-31-9 EINECS: 204-617-8	1,4-dihydroxybenzene (hydroquinone)  Xn R22-40-68  Xi R41  Xi R43  N R50 <hr style="border-top: 1px dashed black;"/>  Muta. 2, H341; Carc. 2, H351  Eye Dam. 1, H318  Aquatic Acute 1, H400  Acute Tox. 4, H302; Skin Sens. 1, H317	75-100%
CAS: 92-43-3 EINECS: 202-155-1	1-phenyl-3-pyrazolidone  Xn R22  N R51/53 <hr style="border-top: 1px dashed black;"/>  Aquatic Chronic 2, H411  Acute Tox. 4, H302	5.0-10%

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

4 First aid measures

- **Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.
Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Clean with water and soap. If possible, also wash with polyethylene glycol 400.
- **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.
Induce vomiting and call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No known symptoms to date.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **Special hazards arising from the substance or mixture**
Can be released in case of fire
Carbon monoxide (CO)
Sulphur oxides (SO_x)
- **Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 3)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:**
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Open and handle container with care.
- **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:** Store only in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **Recommended storage temperature:** 5-30°C
- **Storage class** LGK 13

8 Exposure controls/personal protection

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

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

	123-31-9 1,4-dihydroxybenzene (hydroquinone)
--	--

WEL	Long-term value: 0.5 mg/m ³
-----	--

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Do not eat, drink or smoke while working.
Clean skin thoroughly immediately after handling the product.
Take off immediately all contaminated clothing.
Use skin protection cream for preventive skin protection.
Avoid contact with the eyes.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **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.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 4)

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

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

- **Not suitable are gloves made of the following materials:** Natural rubber, NR

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

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

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Solid.
Colour:	Whitish
Odour:	Not characteristic

- **pH-value (10 g/l) at 25°C:** 7.5

- **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

- **Flash point:** Not applicable

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

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

- **Critical values for explosion:**

Oxidizing properties None

- **Density** Not determined

- **Solubility in / Miscibility with**

Water at 20°C: 50 g/l

- **Solvent content:**

Solids content: 100 %

10 Stability and reactivity

- **Reactivity**

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 5)

- **Possibility of hazardous reactions**
Reacts with strong acids and alkali
Reacts with oxidizing agents
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

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

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

123-31-9 1,4-dihydroxybenzene (hydroquinone)

Oral	LD50	320 mg/kg (rat)
Dermal	LD50	>900 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.

- **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:
Harmful
Irritant

Hydroquinone has been included in the German "TRGS 905" (Technical Rules for Dangerous Substances/Index of carcinogen and mutagen substances or substances dangerous to reproductive systems), and has been classified as "Category 3" of carcinogen and mutagen substances (3 = category of lowest dangerousness). The according EU committees have not yet evaluated this classification.

- **Sensitisation** May cause sensitisation by skin contact.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Limited evidence of a carcinogenic effect.
Possible risk of irreversible effects.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Not determined
- **Persistence and degradability** Not determined
- **Behaviour in environmental systems:** Not determined
- **Bioaccumulative potential** Not determined
- **Ecotoxicological effects:** Not determined
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**

- **General notes:**

This statement was deduced from the properties of the single components.
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.
Danger to drinking water if even small quantities leak into soil.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 6)

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

13 Disposal considerations

- **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

- **Land transport ADR/RID (cross-border)**



- **ADR/RID-GGVS/E Class:** 9 Miscellaneous dangerous substances and articles.

- **Kemler Number:** 90

- **UN-Number:** UN 3077

- **Packaging group:** III

- **Label** 9

- **Special marking:** Symbol (fish and tree)

- **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Hydroquinone, 1-Phenyl-3-pyrazolidone)

- **Limited quantities (LQ)** LQ27

- **Remarks:** "Limited quantity" according to chapter 3.4 ADR

- **Maritime transport IMDG:**



- **IMDG Class:** 9

- **UN Number:** UN 3077

- **Label** 9

- **Packaging group:** III

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

- **Marine pollutant:** No

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.04.2011

Version 1

Revision: 04.04.2011

Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 7)

- **Correct technical name:** ENVIRONMENTALLY SUBSTANCE, SOLID, N.O.S. (Hydroquinone, 1-Phenyl-3-pyrazolidinone)
- **Remarks:** "Limited quantity" according to chapter 3.4 IMDG

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 9
- **UN/ID Number:** UN 3077
- **Label:** 9
- **Special marking:** Symbol (fish and tree)
- **Packaging group:** III
- **Correct technical name:** ENVIRONMENTALLY SUBSTANCE, SOLID, N.O.S. (Hydroquinone, 1-Phenyl-3-pyrazolidinone)
- **Remarks:** Packing Instruction PAX/CAO 911

- **UN "Model Regulation":** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
- **Special precautions for user** Warning: Miscellaneous dangerous substances and articles.

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 pregnant and lactating women must be observed.
- **Technical instructions (air):**

Class	Share in %
I	96.8

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

- **Relevant phrases**
 - H302 Harmful if swallowed.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H341 Suspected of causing genetic defects.
 - H351 Suspected of causing cancer.
 - H400 Very toxic to aquatic life.
 - H411 Toxic to aquatic life with long lasting effects.
 - R22 Harmful if swallowed.
 - R40 Limited evidence of a carcinogenic effect.
 - R41 Risk of serious damage to eyes.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: ADOX ADOTOL Konstant Teil 2

(Contd. of page 8)

R43 May cause sensitisation by skin contact.

R50 Very toxic to aquatic organisms.

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

R68 Possible risk of irreversible effects.

• **Contact:** Phon: ++49 39291 4250

• **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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

• **Sources**

applicable EEC directives:

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>

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