

## Safety Data Sheet

acc. to OSHA HCS

Printing date 07/29/2014

Reviewed on 07/29/2014

### 1: Identification

#### 1.1 Product identifier

Trade name: **DOKUMOL**  
**B/ W DEVELOPER**

Article number: 100272

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:

TETENAL Europe GmbH  
Schützenwall 31-35  
D-22844 Norderstedt/Germany  
Phone: ++49 (0) 40 521 45-0, Fax: ++49 (0) 40 521 45-296  
www.tetenal.com; E-mail: info@tetenal.com

Information department: Department environment and safety. E-Mail: info@tetenal.com

#### 1.4 Emergency telephone number:

Poison Information Centre Berlin/Germany: +49 (0) 30 - 30686 790 (English 24hours)

### 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Avoid contact with eyes, skin and clothing. Avoid mist. Keep container closed. Use eye protection, chemical-resistant gloves and skin protection.

Wash thoroughly after handling. FIRST AID: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and immediately flush skin with soap and with plenty of water. Get medical attention if symptoms occur. If swallowed induce vomiting immediately as directed by medical personnel.



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.



GHS09

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

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

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



Harmful

Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.

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**Irritant**

May cause sensitisation by skin contact.

**Dangerous for the environment**

Very toxic to aquatic organisms.

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

The product has to be labeled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

**2.2 Label elements**

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

Reduced labeling possible if &lt;125 ml

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

**Hazard pictograms**



GHS05



GHS07



GHS08



GHS09

**Signal word** Danger

**Hazard-determining components of labeling:**

hydroquinone (1,4-dihydroxybenzene)

**Hazard statements**

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

**Precautionary statements**

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

P102 Keep out of reach of children.

P103 Read label before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

P273 Avoid release to the environment.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

**Classification system:**

**NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

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**. HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

**. 2.3 Other hazards**

**. Results of PBT and vPvB assessment**

**. PBT:** Not applicable.

**. vPvB:** Not applicable.

### 3: Composition/information on ingredients

**. 3.2 Chemical characterization: Mixtures**

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

**. Dangerous components:**

CAS: 123-31-9 Index number: 604-005-00-4 RTECS: MX 3500000 Reg.nr.: 01-2119524016-51	hydroquinone (1,4-dihydroxybenzene)	2.5-5%
CAS: 584-08-7 RTECS: TS 7750000 Reg.nr.: 01-2119532646-36	potassium carbonate	1-5%
CAS: 1330-43-4 Index number: 005-011-00-4 RTECS: VZ 2240000	disodium tetraborate, anhydrous	1-3%
CAS: 67-43-6 Reg.nr.: 01-2119497281-34	Diethylenetriamine pentaacetic acid (DTPA)/ N-carboxymethyliminobis(ethylenenitrilo)tetra(acetic acid)	1-5%
CAS: 92-43-3 Index number: 606-022-00-2	1-phenyl-3-pyrazolidone (Phenidone A )	0.1- <1%

**. SVHC**

1330-43-4	disodium tetraborate, anhydrous
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### 4: First-aid measures

**. 4.1 Description of first aid measures**

**. After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**. After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**. After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**. After swallowing:** If symptoms persist consult doctor.

**. 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.

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### 5: Fire-fighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
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.
- . **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.

### 7: Handling and storage

- . **7.1 Precautions for safe handling**  
When diluting, always stir the product into standing water, not water to product.
- . **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 receptacles:** No special requirements.
- . **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with oxidizing and acidic materials.
- . **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
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.

### 8: Exposure controls/personal protection

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

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

**123-31-9 hydroquinone (1,4-dihydroxybenzene) (3-5%)**

PEL	2 mg/m <sup>3</sup>
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REL	Short-term value: C 2* mg/m <sup>3</sup> *15-min
TLV	1 mg/m <sup>3</sup> SEN

**1330-43-4 disodium tetraborate, anhydrous (1- <3%)**

REL	1 mg/m <sup>3</sup> anhydrous
TLV	Short-term value: 6* mg/m <sup>3</sup> Long-term value: 2* mg/m <sup>3</sup> *as inhalable fraction

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

. **8.2 Exposure controls**

. **Personal protective equipment:**

. **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

. **Breathing equipment:** Not required.

. **Protection of hands:**



Protective 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	breakthroug-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.

. **Eye protection:**



Tightly sealed goggles

. **Body protection:** Protective work clothing

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### 9: Physical and chemical properties

#### . 9.1 Information on basic physical and chemical properties

##### . General Information

##### . Appearance:

Form: Fluid  
Color: Colorless  
Odor: Odorless

. pH-value at 20 °C (68 °F): >11

##### . Change in condition

Melting point/Melting range: Undetermined.  
Boiling point/Boiling range: Undetermined.

. Flash point: Not applicable.

. Auto igniting: Product is not selfigniting.

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

. Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

. Density at 20 °C (68 °F): 1.292 g/cm<sup>3</sup> (10.782 lbs/gal)

##### . Solubility in / Miscibility with

Water: Fully miscible.

##### . Solvent content:

Organic solvents: 0.0 %  
Water: >67 %

. 9.2 Other information: No further relevant information available.

### 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: No dangerous reactions known.

. 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:

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

Oral	LD50	320 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

##### . Primary irritant effect:

. on the skin: No irritant effect.

. on the eye: Strong irritant with the danger of severe eye injury.

. Sensitization: Sensitization possible through skin contact.

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**. Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

**. Carcinogenic categories**

**. IARC (International Agency for Research on Cancer)**

123-31-9	hydroquinone (1,4-dihydroxybenzene)	3
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**. NTP (National Toxicology Program)**

None of the ingredients is listed.

**. OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 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:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Water hazard class 3 (Self-assessment): extremely hazardous for water

Danger to drinking water if even extremely 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.

### 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.

**. Uncleaned packagings:**

**. Recommendation:** Disposal must be made according to official regulations.

**. Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14: Transport information

**. 14.1 UN-Number**

**. DOT**

Void

**. ADR, IMDG, IATA**

UN3082

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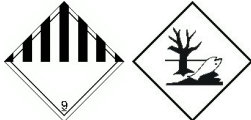
**. 14.2 UN proper shipping name**

. DOT Void  
 . ADR 3082 Environmentally hazardous substances, liquid, n.o.s. (hydroquinone)  
 . IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone), MARINE POLLUTANT  
 . IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)

**. 14.3 Transport hazard class(es)**

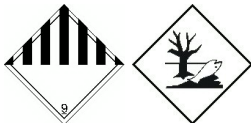
. DOT Void  
 . Class Void

. ADR



. Class 9 (M6) Miscellaneous dangerous substances and articles  
 . Label 9

. IMDG, IATA



. Class 9 Miscellaneous dangerous substances and articles  
 . Label 9

**. 14.4 Packing group**

. DOT Void  
 . ADR, IMDG, IATA III

**. 14.5 Environmental hazards:**

**. Marine pollutant:**

**. Special marking (ADR):**

**. Special marking (IATA):**

Product contains environmentally hazardous substances: hydroquinone  
 Yes  
 Symbol (fish and tree)  
 Symbol (fish and tree)  
 Symbol (fish and tree)

**. 14.6 Special precautions for user**

**. Danger code (Kemler):**

**. EMS Number:**

Warning: Miscellaneous dangerous substances and articles  
 90  
 F-A,S-F

**. 14.7 Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**

Not applicable.

**. Transport/Additional information:**

. ADR

**. Excepted quantities (EQ)**

Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

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<b>. IMDG</b>	
<b>. Limited quantities (LQ)</b>	5L
<b>. Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>. UN "Model Regulation":</b>	UN3082, Environmentally hazardous substances, liquid, n.o.s. (hydroquinone), 9, III

### 15: Regulatory information

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

**. Section 355 (extremely hazardous substances):**

123-31-9	hydroquinone (1,4-dihydroxybenzene)
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**. Section 313 (Specific toxic chemical listings):**

123-31-9	hydroquinone (1,4-dihydroxybenzene)
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**. TSCA (Toxic Substances Control Act):**

7732-18-5	water
123-31-9	hydroquinone (1,4-dihydroxybenzene)
584-08-7	potassium carbonate
1330-43-4	disodium tetraborate, anhydrous
1310-73-2	sodium hydroxide (caustic soda)
7601-54-9	trisodium orthophosphate
7758-02-3	potassium bromide
92-43-3	1-phenyl-3-pyrazolidone (Phenidone A)
95-14-7	benzotriazole
86-93-1	1-phenyltetrazole-5-thiol

**. Proposition 65**

**. Chemicals known to cause cancer:**

None of the ingredients is listed.

**. Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**. Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**. Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**. Cancerogenity categories**

**. EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**. TLV (Threshold Limit Value established by ACGIH)**

123-31-9	hydroquinone (1,4-dihydroxybenzene)	A3
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**. NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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. **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. **Contact:** e-mail: sida@tetenal.com

. **Date of preparation / last revision** 07/29/2014 / 1

. **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)

ICAO: International Civil Aviation Organization

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

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

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

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

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

. **\* Data compared to the previous version altered.**

USA