

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

TETENAL

Printing date 05.10.2020

version no: 5

Revision: 05.10.2020

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

1.1 Product identifier

Trade name: **DOKUMOL**

Information Dangerous good (see point 14)

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 1847 GmbH
Schützenwall 31-35
D-22844 Norderstedt /Germany
Tel.: +49 (0) 40 521 45-0; Fax: +49 (0)40-52145-296
www.tetenal.com; E-mail: info@tetenal.com
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www.tetenal.com; E-mail: info@tetenal.com

Further information obtainable from: Department product safety. E-Mail: sida@tetenal.com

1.4 Emergency telephone number:

Poison Information Centre Germany: +49 (0) 30 - 30686 700 (English and German 24 hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Eye Dam. 1 H318 Causes serious eye damage.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Muta. 2 H341 Suspected of causing genetic defects.
Carc. 2 H351 Suspected of causing cancer.
Aquatic Acute 1 H400 Very toxic to aquatic life.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Reduced labeling possible if <125 ml

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

Hazard pictograms



GHS05

GHS07

GHS08

GHS09

Signal word Danger

Hazard-determining components of labelling:

hydroquinone

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.

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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.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves / eye protection / face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 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/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P391 Collect spillage.
 P405 Store locked up.
 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 characterisation: Mixtures

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

Dangerous components:

CAS: 123-31-9 EINECS: 204-617-8 Index number: 604-005-00-4 Reg.nr.: 01-2119524016-51	hydroquinone ☠ Muta. 2, H341; Carc. 2, H351; ☠ Eye Dam. 1, H318; ☠ Aquatic Acute 1, H400 (M=10); ☠ Acute Tox. 4, H302; Skin Sens. 1, H317	2.5-5%
CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36	potassium carbonate ☠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-5%
CAS: 1330-43-4 EINECS: 215-540-4 Index number: 005-011-00-4	disodium tetraborate, anhydrous ☠ Repr. 1B, H360FD	1-3%
CAS: 67-43-6 EINECS: 200-652-8 Index number: 607-735-00-1 Reg.nr.: 01-2119497281-34	Diethylenetriamine pentaacetic acid (DTPA) ☠ STOT RE 2, H373; ☠ Acute Tox. 4, H332; Eye Irrit. 2, H319	1-5%
CAS: 92-43-3 EINECS: 202-155-1 Index number: 606-022-00-2 Reg.nr.: 01-2120118765-53-XXXX	1-Phenyl-3-pyrazolidone ☠ Aquatic Chronic 2, H411; ☠ Acute Tox. 4, H302	0.1- <1%

SVHC

1330-43-4 disodium tetraborate, anhydrous

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

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SECTION 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.

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** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

SECTION 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.

SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling** When diluting always pour product into water and not vice versa.
- . **Information about fire - and explosion protection:** 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 oxidising 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: 5-30°C
Protect from exposure to the light.
- . **7.3 Specific end use(s)** No further relevant information available.

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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 (1-5%)

WEL Long-term value: 0.5 mg/m³

1330-43-4 disodium tetraborate, anhydrous (1-5%)

WEL Long-term value: 1 mg/m³

1310-73-2 sodium hydroxide (caustic soda) (0.5-2%)

WEL Short-term value: 2 mg/m³

. **DNELs**

123-31-9 hydroquinone

Dermal	Long-term - systemic - effects	128 mg/kg bw/day (wkd)
	Long-term - systemic effects	64 mg/kd bw/day (wkd)
Inhalative	Long-term exposure-local effects	7 mg/m ³ (wkd)
	Long-term - local - effects	1 mg/m ³ (wkd)
	Long-term - systemic effects	1.74 mg/m ³ (wkd)
	Long-term - local effects	0.5 mg/m ³ (wkd)

67-43-6 Diethylenetriamine pentaacetic acid (DTPA)

Oral	Akute - systemic effects, general population	0.9 mg/kg bw/day (-)
Dermal	Long-term - systemic - effects	9219 mg/kg bw/day (wkd)
	Long-term - systemic effects	4609 mg/kd bw/day (wkd)
Inhalative	Long-term - local - effects	4.5 mg/m ³ (wkd)
	Akute-lokale Effekte	2.9 mg/m ³ (-)
	Long-term - systemic effects	0.8 mg/m ³ (-)

. **PNECs**

123-31-9 hydroquinone

Aquatic compartment - freshwater	0.000114 mg/l (Water)
Aquatic compartment - marine water	0.000114 mg/l (Water)
Aquatic compartment -water,intermittent releases	0.00134 mg/l (Water)
Aquatic compartment -sediment in freshwater	0.00098 mg/kg sed dw (Water)
Aquatic compartment -sediment in marine water	0.000097 mg/kg sed dw (Water)
Terrestrial compartment -soil	0.000129 mg/kg dw (Soil)
Sewage treatment plant (Abwasserreinigungsanlagen)	0.71 mg/l (Sewage Treatment Plant)

67-43-6 Diethylenetriamine pentaacetic acid (DTPA)

Aquatic compartment - freshwater	5 mg/l (-)
Aquatic compartment - marine water	0.5 mg/l (-)
Aquatic compartment -water,intermittent releases	2.45 mg/l (-)
Aquatic compartment -sediment in freshwater	18 mg/kg sed dw (-)
Terrestrial compartment -soil	0.667 mg/kg dw (-)
Sewage treatment plant (Abwasserreinigungsanlagen)	50 mg/l (-)

. **Additional information:** The lists valid during the making 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

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Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

. **Respiratory protection:** 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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless

. **pH-value at 20 °C:** >11

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

. **Flash point:** Not applicable.. **Auto-ignition temperature:** Product is not selfigniting.. **Explosive properties:** Product does not present an explosion hazard.. **Vapour pressure:** Not determined.. **Density at 20 °C:** ~1.3 g/cm³. **Solubility in / Miscibility with water:** Fully miscible.

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Solvent content:
Water: 50-90 %

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- . **10.1 Reactivity** No further relevant information available.
- . **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.

SECTION 11: Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity** Based on available data, the classification criteria are not met.
- . **LD/LC50 values relevant for classification:**
- 123-31-9 hydroquinone**
- Oral LD50 302 mg/kg (rat)
- Dermal LD50 >2000 mg/kg (rabbit)
- 584-08-7 potassium carbonate**
- Oral LD50 >2000 mg/kg (rat)
- 67-43-6 Diethylenetriamine pentaacetic acid (DTPA)**
- Oral LD50 >5000 mg/kg (rat)
- Dermal LD50 >2000 mg/kg (rat)
- Inhalative LC50 4h: 1-5 mg/l (rat)
- 92-43-3 1-Phenyl-3-pyrazolidone**
- Oral LD50 475 mg/kg (rat)
- . **Primary irritant effect:**
- . **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- . **Serious eye damage/irritation**
- Causes serious eye damage.
- . **Respiratory or skin sensitisation**
- May cause an allergic skin reaction.
- . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- . **Germ cell mutagenicity**
- Suspected of causing genetic defects.
- . **Carcinogenicity**
- Suspected of causing cancer.
- . **Reproductive toxicity** Based on available data, the classification criteria are not met.
- . **STOT-single exposure** Based on available data, the classification criteria are not met.
- . **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- . **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

. 12.1 Toxicity

. Aquatic toxicity:

123-31-9 hydroquinone

EC50 48h: 0.29 mg/l (daphnia magna (Water flea))

LC50 96h: 0.044 mg/l (fish: Pimephales promelas)

67-43-6 Diethylenetriamine pentaacetic acid (DTPA)

LC50 96h: >100 mg/l (Leuciscus leuciscus (Karpfenfisch))

96h: >674 mg/l (fish: Oncorhynchus mykiss)

92-43-3 1-Phenyl-3-pyrazolidone

EC50 96h: 10 mg/l (daphnia magna (Water flea))

LC50 96h: 1-10 mg/l (fish)

. 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 (German Regulation) (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.

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.

. European waste catalogue

09 01 01 water-based developer and activator solutions

. Uncleaned packaging:

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

. Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

. 14.1 UN-Number

. ADR, IMDG, IATA

UN3082

. 14.2 UN proper shipping name

. 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)

. ADR

. Class

9 (M6) Miscellaneous dangerous substances and articles.

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. Label	9
. IMDG, IATA	
. Class	9 Miscellaneous dangerous substances and articles.
. Label	9
. 14.4 Packing group . ADR, IMDG, IATA	III
. 14.5 Environmental hazards:	Product contains environmentally hazardous substances: hydroquinone
. Marine pollutant:	Yes
. Special marking (ADR):	Symbol (fish and tree)
. Special marking (IATA):	Symbol (fish and tree)
. 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
. Hazard identification number (Kemler code):	90
. EMS Number:	F-A,S-F
. Stowage Category	A
. 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
. Transport/Additional information:	Due to special provision 375 ADR and chapter 2.10.2. IMDG this item does not need to be labeled as dangerous goods.
. ADR	
. Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
. Transport category	3
. Tunnel restriction code	E
. IMDG	
. Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
. UN "Model Regulation":	Void

SECTION 15: Regulatory information

- . 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- . REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- . National regulations:
- . Other regulations, limitations and prohibitive regulations
- . Substances of very high concern (SVHC) according to REACH, Article 57
- 1330-43-4 disodium tetraborate, anhydrous
- . 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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.

- . Relevant phrases
- H302 Harmful if swallowed.

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- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H360FD May damage fertility. May damage the unborn child.
- H373 May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

· **Contact:** E: sida@tetenal.com

· **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 Organisation

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 Harmonised 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 2: Carcinogenicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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