

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

TETENAL

Printing date 01.09.2021

version no: 10

Revision: 01.09.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name: **EUKOBROM**
B / W Paper Developer

Article number: 100296, 100294

Index number:

None of the ingredients is listed.

UFI: 1C80-80S3-P00Y-0PN8

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 Black and white 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

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**

Skin Irrit. 2 H315 Causes skin irritation.
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**

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

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.
H400 Very toxic to aquatic life.

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Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 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	hydroquinone	1-5%
EINECS: 204-617-8	☠ Muta. 2, H341; Carc. 2, H351; ☠ Eye Dam. 1, H318; ☠ Aquatic	
Index number: 604-005-00-4	Acute 1, H400 (M=10); ☠ Acute Tox. 4, H302; Skin Sens. 1, H317	
Reg.nr.: 01-2119524016-51		
CAS: 584-08-7	potassium carbonate	1-5%
EINECS: 209-529-3	☠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
Reg.nr.: 01-2119532646-36		
CAS: 1330-43-4	disodium tetraborate, anhydrous	1-5%
EINECS: 215-540-4	☠ Repr. 1B, H360FD	
Index number: 005-011-00-4		
CAS: 140-01-2	Diethylenetriaminepentaacetic acid, pentasodium salt (DTPA-Na5)	1-5%
EINECS: 205-391-3	☠ STOT RE 2, H373; ☠ Acute Tox. 4, H332	
Index number: 607-736-00-7		
Reg.nr.: 01-2119474445-33		
CAS: 1310-73-2	sodium hydroxide (caustic soda)	<1%
EINECS: 215-185-5	☠ Met. Corr.1, H290; Skin Corr. 1A, H314	
Index number: 011-002-00-6		
Reg.nr.: 01-2119457892-27		

SVHC

1330-43-4 disodium tetraborate, anhydrous

Additional information: For the wording of the listed hazard 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.

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- . **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. If symptoms persist, consult a doctor.
- . **After swallowing:**
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- . **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:** Use fire extinguishing methods suitable to surrounding conditions.
- . **5.2 Special hazards arising from the substance or mixture**
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Sulphur dioxide (SO₂)
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 clothing.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- . **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
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.
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:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

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Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidising agents.

Further information about storage conditions:

Recommended storage temperature: 15-25°C

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: 5-30°C

Protect from exposure to the light.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredients with limit values that require monitoring at the workplace:

123-31-9 hydroquinone (1-5%)

WEL (Great Britain) Long-term value: 0.5 mg/m³PEL (USA) Long-term value: 2 mg/m³REL (USA) Ceiling limit: 2* mg/m³
*15-minTLV (USA) Long-term value: 1 mg/m³
DSEN, A3

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

WEL (Great Britain) Long-term value: 1 mg/m³REL (USA) Long-term value: 1 mg/m³
anhydrousTLV (USA) Short-term value: 6* mg/m³
Long-term value: 2* mg/m³
*as inhalable fraction, A4

1310-73-2 sodium hydroxide (caustic soda) (<1%)

WEL (Great Britain) Short-term value: 2 mg/m³PEL (USA) Long-term value: 2 mg/m³REL (USA) Ceiling limit: 2 mg/m³TLV (USA) Ceiling limit: 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/kg bw/day (wkd)

Inhalative Long-term exposure-local effects 7 mg/m³ (wkd)Long-term - local - effects 1 mg/m³ (wkd)Long-term - systemic effects 1.74 mg/m³ (wkd)Long-term - local effects 0.5 mg/m³ (wkd)

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)

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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)

. **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:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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.

. Eye protection:



Tightly sealed goggles

. Body protection: Protective work clothing

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SECTION 9: Physical and chemical properties

. 9.1 Information on basic physical and chemical properties

. General Information

. Appearance:

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

. pH-value at 20 °C: ~11

. Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	>100 °C

. Flash point: Not applicable.

. Flammability (solid, gas): Not applicable.

. Decomposition temperature: Not determined.

. Auto-ignition temperature: Product is not selfigniting.

. Explosive properties: Product does not present an explosion hazard.

. Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

. Vapour pressure: Not determined.

Density at 20 °C:	1.29 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:

Water:	50-90 %
VOC (EC)	0.00 %

Solids content: 0.0 %

. 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: Stable at environment temperature.

. 10.3 Possibility of hazardous reactions Reacts with acids, alkalis and oxidising 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:

Nitrogen oxides (NO_x)

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Irritant gases/vapours
 Carbon monoxide and carbon dioxide

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 >2,000 mg/kg (rabbit)
- . **Primary irritant effect:**
- . **Skin corrosion/irritation**
Causes skin irritation.
- . **Serious eye damage/irritation**
Causes serious eye damage.
- . **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- . **Additional toxicological information:**
- . **Acute effects (acute toxicity, irritation and corrosivity)**
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)**
- . **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.

SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:**
- 123-31-9 hydroquinone**
- EC50 48 mg/l (daphnia magna (Water flea))
- LC50 96 mg/l (fish: 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.
- . **Ecotoxicological effects:**
- . **Remark:** Very toxic for fish
- . **Additional ecological information:**
- . **General notes:**
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Do not allow product to reach ground water, water course or sewage system.

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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 00 00 WASTES FROM THE PHOTOGRAPHIC INDUSTRY

09 01 00 wastes from the photographic industry

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**

UN3267

14.2 UN proper shipping name

. **ADR**

3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(SODIUM HYDROXIDE, hydroquinone),
ENVIRONMENTALLY HAZARDOUS

. **IMDG**

CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(SODIUM HYDROXIDE, hydroquinone), MARINE
POLLUTANT

. **IATA**

CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(SODIUM HYDROXIDE)

14.3 Transport hazard class(es)

. **ADR**

. **Class**

8 (C7) Corrosive substances.

. **Label**

8

. **IMDG, IATA**

. **Class**

8 Corrosive substances.

. **Label**

8

14.4 Packing group

. **ADR, IMDG, IATA**

III

14.5 Environmental hazards:

Product contains environmentally hazardous substances:
hydroquinone

. **Marine pollutant:**

Yes

Symbol (fish and tree)

. **Special marking (ADR):**

Symbol (fish and tree)

14.6 Special precautions for user

Warning: Corrosive substances.

. **Hazard identification number (Kemler code):**

80

. **EMS Number:**

F-A,S-B

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. Segregation groups	Alkalis
. Stowage Category	A
. Stowage Code	SW2 Clear of living quarters.
. Segregation Code	SG35 Stow "separated from" SGG1-acids
. 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
. Transport/Additional information:	

. ADR	
. Limited quantities (LQ)	5L
. 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	
. Limited quantities (LQ)	5L
. Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
. UN "Model Regulation":	UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (SODIUM HYDROXIDE, HYDROQUINONE), 8, III, ENVIRONMENTALLY HAZARDOUS

. 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 . Labelling according to Regulation (EC) No 1272/2008 GHS label elements

. Directive 2012/18/EU
 . Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
 . Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
 . 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

H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 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.

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H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

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 relatif au transport international 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)

VOC: Volatile Organic Compounds (USA, EU)

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

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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

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

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