

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 04/29/2011

Reviewed on 04/29/2011

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

- **Product identifier**
- **Trade name:** Variospeed W B/W Paper Developer
- **Article number:** 102446 1L, 102448 5L, 44073
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Developer for photographic use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
TETENAL AG & CO. KG
Schützenwall 31-35
D-22844 Norderstedt
Tel.: +49 40 521 45-0
Fax: +49 40 521 45-296
www.tetenal.com
E-mail: info@tetenal.com
- **Information department:** Department environment and safety. E-mail: info@tetenal.com
- **Emergency telephone number:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

2 Composition/information on ingredients

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

· **Dangerous components:**

CAS: 123-31-9 RTECS: MX 3500000	Hydroquinone (1,4-dihydroxybenzene) ☠ H341; H351; ☠ H318; ☠ H400; ☠ H302; H317	2.5-5%
CAS: 584-08-7 RTECS: TS 7750000	potassium carbonate ☠ H315; H319	1-5%
CAS: 1330-43-4 RTECS: VZ 2240000	disodium tetraborate, anhydrous ☠ H360	2-3%
CAS: 92-43-3	Phenidone A / 1-phenyl-3-pyrazolidone ☠ H411; ☠ H302	<1%

· **SVHC**

1330-43-4	disodium tetraborate, anhydrous
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3 Hazards identification

· **Classification of the substance or mixture**



GHS08 Health hazard

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.



GHS05 Corrosion

H318 Causes serious eye damage.



GHS09 Environment

H400 Very toxic to aquatic life.

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GHS07

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.



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 labelled 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.

· **Label elements**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

GHS07

GHS08

GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Hydroquinone (1,4-dihydroxybenzene)

Tetrasodium ethylenediaminetetraacetate / EDTA- sodiumsalt

· **Hazard statements**

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

Very toxic to aquatic life.

· **Precautionary statements**

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

Keep out of reach of children.

Read label before use.

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

Use personal protective equipment as required.

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

Immediately call a POISON CENTER or doctor/physician.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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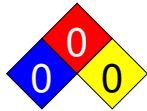
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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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



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

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

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Rinse out mouth and then drink plenty of water.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Sulphur dioxide (SO₂)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **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 equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.

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Do not allow to enter sewers/ surface or ground water.

· **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.

Pick up mechanically.

· **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

· **Handling:**

· **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

· **Information about protection against explosions and fires:** Protect from heat.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

· **Further information about storage conditions:**

Protect from heat and direct sunlight.

Protect from exposure to the light.

Store under lock and key and out of the reach of children.

Recommended storage temperature: 5-25°C

8 Exposure controls/personal protection

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

· **Control parameters**

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

123-31-9 Hydroquinone (1,4-dihydroxybenzene) (1-5%)

PEL () 2 mg/m³

REL () Short-term value: C 2* mg/m³
*15-min

TLV () 1 mg/m³
SEN

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

REL () 5 mg/m³

TLV () Short-term value: 6* mg/m³
Long-term value: 2* mg/m³
*as inhalable fraction

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

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Avoid contact with the eyes and skin.

· **Breathing equipment:**

Not necessary if room is well-ventilated.
required at the appearance from fumes/vapours/aerosol. Filter ABEK
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.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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: Butyl rubber with breakthrough-time: ≥ 480 min, layer thickness: $\geq 0,4$ mm
Gloves made of nitrile rubber with layer thickness $>0,38$ mm and breakthrough-time >480 min
Glove material: Neopren with breakthrough time: >240 min, layer thickness: $>0,65$ mm
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

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

- Form:** Fluid
- Color:** Light yellow
- Odor:** Odorless

· **pH-value at 20°C (68°F):** 11.2

· **Change in condition**

- Melting point/Melting range:** Undetermined.
- Boiling point/Boiling range:** $< 100^{\circ}\text{C}$ ($< 212^{\circ}\text{F}$)

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

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· **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):** 1.29 g/cm³ (10.765 lbs/gal)

· **Solubility in / Miscibility with Water:** Fully miscible.

· **Solvent content:**
Organic solvents: 0.0 %
Water: >66 %

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at ambient temperature.
- **Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents.
- **Incompatible materials:** In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Hazardous decomposition products:**
 Irritant gases/vapors
 Carbon monoxide and carbon dioxide

11 Toxicological information

- **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)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

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

12 Ecological information

- **Toxicity**

· **Aquatic toxicity:**

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

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

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

- **Persistence and degradability** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish

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- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even extremely small quantities leak into the ground.
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.

- **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.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**

- **Hazard class:** -

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



- **ADR/RID class:** 9 (M6) Miscellaneous dangerous substances and articles

- **Danger code (Kemler):** 90

- **UN-Number:** 3082

- **Packaging group:** III

- **Label:** 9

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

- **UN proper shipping name:** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)

- **Maritime transport IMDG:**



- **IMDG Class:** 9

- **UN Number:** 3082

- **Label:** 9

- **Packaging group:** III

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- **EMS Number:** F-A,S-F
- **Marine pollutant:** Yes
Symbol (fish and tree)
- **Propper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(hydroquinone)

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



- **ICAO/IATA Class:** 9
- **UN/ID Number:** 3082
- **Label:** 9
- **Special marking:** Symbol (fish and tree)
- **Packaging group:** III
- **Propper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(hydroquinone)

- **UN "Model Regulation":**
UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
- **Special precautions for user:** Warning: Miscellaneous dangerous substances and articles
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

15 Regulatory information

- **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)

· **Section 313 (Specific toxic chemical listings):**

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

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **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.

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

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

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

123-31-9	Hydroquinone (1,4-dihydroxybenzene)	A3
1330-43-4	disodium tetraborate, anhydrous	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Hydroquinone (1,4-dihydroxybenzene)
Tetrasodium ethylenediaminetetraacetate / EDTA- sodiumsalt

· **Hazard statements**

Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Suspected of causing cancer.
Very toxic to aquatic life.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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.

· **Department issuing MSDS:** Department product safety

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

· **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

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DOT: US Department of Transportation
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)
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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