

10.05.2010

**Kit Components**

Product code	Description
<b>102228</b>	<b>Colortec C-41 Negative-Kit Rapid liquid f. 5L</b>

Components:

45605	COLORTEC C-41 Rapid Farbewickler Part 1
45606	COLORTEC C-41 Rapid Farbewickler Part 2
45607	COLORTEC C-41 Rapid Farbewickler Part 3
44020	COLORTEC E-6 /C-41 3-Bad Bleichfixierbad BX Part1
44021	COLORTEC E-6 / C-41 Bleichfixierbad BX Part 2
45544	COLORTEC C-41 Stabilisierbad Regenerator STAB-BNP

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

## 1 Identification of the substance/preparation and of the company/undertaking

### · Product details

- **Trade name:** COLORTEC C-41 Rapid Color-Developer Part 1
- **Article number:** 45605, zu 102226 P1, zu102228 P1, 6523/3 Part 1
- **Application of the substance / the preparation** Developer for photographic use

### · Manufacturer/Supplier:

TETENAL AG & CO. KG  
Schützenwall 31-35  
D-22844 Norderstedt / Germany  
Tel.: +49 040 521 45-0  
Fax: +49 040-52145-296  
www.tetenal.com  
E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road  
Leicester LE3 1TH / Great Britain  
Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com
- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

## 2 Hazards identification

### · Hazard description:



Xi Irritant

### · 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.

R 43 May cause sensitisation by skin contact.

R 40 Limited evidence of a carcinogenic effect.

### · Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### · GHS label elements



Warning

H351 - Suspected of causing cancer.



Warning

H317 - May cause an allergic skin reaction.

### · Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P281 Use personal protective equipment as required.

### · Response:

P321 Specific treatment (see on this label).

### · Storage:

P405 Store locked up.

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


(Contd. of page 1)

- **Disposal:**  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 10039-54-0	bis(hydroxylammonium)sulfate	1-5%
EINECS: 233-118-8	Carc. Cat. 3;  Xn,  Xi,  E,  N; R 2-21/22-36/38-40-43-48/22-50	
	Warning:  3.6/2, 3.9/2;  2.16/1;  4.1.A/1;  3.1.O/4, 3.1.D/4, 3.4.S/1; 3.2/2, 3.3/2	

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

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.
- **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:**  
If symptoms persist consult doctor.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.

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- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **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.
  - Store under lock and key and out of the reach of children.
  - Recommended storage temperature: 5-25°C
  - Protect from exposure to the light.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients 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 valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - 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:** Not necessary if room is well-ventilated.
- **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:  $\geq 480$  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.

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## · Eye protection:



Tightly sealed goggles

## · Body protection: Protective work clothing

### 9 Physical and chemical properties

## · General Information

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

## · Change in condition

<b>Melting point/Melting range:</b>	0°C
<b>Boiling point/Boiling range:</b>	> 100°C

## · Flash point: Not applicable.

## · Self-igniting: Product is not selfigniting.

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

## · Vapour pressure at 20°C: 23 hPa

· Density at 20°C: 1 g/cm<sup>3</sup>

## · Solubility in / Miscibility with water: Fully miscible.

## · pH-value at 20°C: 3.5

## · Solvent content:

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	96.5 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

### 11 Toxicological information

## · Acute toxicity:

## · LD/LC50 values relevant for classification:

10039-54-0 bis(hydroxylammonium)sulfate

Oral	LD50	600 mg/kg (rat)
Dermal	LD50	1500 mg/kg (rabbit)

## · Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

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- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
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
- **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological information

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

**10039-54-0 bis(hydroxylammonium)sulfate**

EC50 48h: 1.62 mg/l (daphnia magna)

LC50 96h: 1.2 mg/l (daphnia magna)

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

### 13 Disposal considerations

- **Product:**

- **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:**

Dispose of packaging according to regulations on the disposal of packagings.  
Disposal must be made according to official regulations.

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

### 14 Transport information

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

· **ADR/RID class:** -

- **Maritime transport IMDG:**

· **IMDG Class:** -

· **Marine pollutant:** No

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

· **ICAO/IATA Class:** -

· **UN "Model Regulation":** -

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### 15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



Xi Irritant

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

bis(hydroxylammonium)sulfate

· **Risk phrases:**

43 May cause sensitisation by skin contact.  
40 Limited evidence of a carcinogenic effect.

· **Safety phrases:**

2 Keep out of the reach of children.  
24 Avoid contact with skin.  
37 Wear suitable gloves.  
46 If swallowed, seek medical advice immediately and show this container or label.  
29 Do not empty into drains.

### 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 R-phrases**

2 Risk of explosion by shock, friction, fire or other sources of ignition.  
21/22 Harmful in contact with skin and if swallowed.  
36/38 Irritating to eyes and skin.  
40 Limited evidence of a carcinogenic effect.  
43 May cause sensitisation by skin contact.  
48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
50 Very toxic to aquatic organisms.

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

· **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

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

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### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC C-41 Rapid Colour Developer Part 2

- **Article number:** 45606, zu102226 Part2, zu102228 Part2, 6523/3 Part2

- **Application of the substance / the preparation** Developer for photographic use

- **Manufacturer/Supplier:**

TETENAL AG &amp; CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

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TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:**



Xn Harmful

N Dangerous for the environment

- **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.

R 22 Harmful if swallowed.

R 43 May cause sensitisation by skin contact.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements**

**Warning**

H302 - Harmful if swallowed.

H319 - Causes serious eye irritation.

H317 - May cause an allergic skin reaction.



H411 - Toxic to aquatic life with long lasting effects.

- **Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

- **Response:**

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

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P321 Specific treatment (see on this label).

**Disposal:**

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

### 3 Composition/information on ingredients

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

**Dangerous components:**

CAS: 25646-77-9 EINECS: 247-162-0	(4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate p-Phenylenediamine derivat (CD-4) ☠ T, ☠ Xi, ☠ N; R 25-43-48/22-50/53 Danger: ☠ 3.1.O/3 Warning: ☠ 3.9/2; ☠ 4.1.A/1, 4.1.C/1; 3.4.S/1	1-5%
CAS: 7681-57-4 EINECS: 231-673-0	disodium disulphite ☠ Xn, ☠ Xi; R 22-31-41 Danger: ☠ 3.3/1 Warning: ☠ 3.1.O/4	1-5%

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

### 4 First aid measures

**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**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 (15 min) under running water.

**After swallowing:**

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

### 5 Fire-fighting measures

**Suitable extinguishing agents:**
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
**Special hazards caused by the substance, its products of combustion or resulting gases:**
Nitrogen oxides (NO<sub>x</sub>)Sulphur dioxide (SO<sub>2</sub>)
**Protective equipment:** No special measures required.

### 6 Accidental release measures

**Person-related safety precautions:** Ensure adequate ventilation

**Measures for environmental protection:**

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.

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· **Measures for cleaning/collecting:**

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation.

## 7 Handling and storage

· **Handling:**

· **Information for safe handling:**

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

· **Information about fire - and explosion protection:** No special measures required.

· **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - Store under lock and key and out of the reach of children.
  - Recommended storage temperature: 5-25°C
  - Protect from exposure to the light.

## 8 Exposure controls/personal protection

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

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

**7681-57-4 disodium disulphite (<2%)**

WEL Long-term value: 5 mg/m<sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.

· **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 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.

· **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**

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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.

- **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  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

Safety glasses

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Pungent to sulfur dioxide

- **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

- **Flash point:** Not applicable.

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

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

- **Vapour pressure at  $20^{\circ}\text{C}$ :** 23 hPa

- **Density at  $20^{\circ}\text{C}$ :** 1.04 g/cm<sup>3</sup>

- **Solubility in / Miscibility with water:** Fully miscible.

- **pH-value at  $20^{\circ}\text{C}$ :** 4.3

- **Solvent content:**

**Organic solvents:** 0.0 %

**Water:** 91.9 %

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

- **Materials to be avoided:**

- **Dangerous reactions** Reacts with acids, alkalis and oxidizing agents.

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· **Dangerous decomposition products:** Irritant gases/vapours

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### 11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

**25646-77-9 (4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate  
p-Phenylenediamine derivate (CD-4)**

Oral	LD50	2300 mg/kg (mouse) 58 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 the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

· **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological information

· **Ecotoxic effects:**

· **Remark:** Toxic for fish

· **Additional ecological information:**

· **General notes:**

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

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

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

### 13 Disposal considerations

· **Product:**

· **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.

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### 14 Transport information

#### · 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
- **Hazard label:** 9
- **Special marking:** Symbol (fish and tree)
- **Description of goods:** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate)
- **Tunnel restriction code** E

#### · Maritime transport IMDG:



- **IMDG Class:** 9
- **UN Number:** 3082
- **Label** 9
- **Packaging group:** III
- **EMS Number:** F-A,S-F
- **Marine pollutant:** Yes  
Symbol (fish and tree)
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate )

#### · 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
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate )

#### · UN "Model Regulation":

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

### 15 Regulatory information

#### · Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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· **Code letter and hazard designation of product:**



Xn Harmful  
N Dangerous for the environment

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

(4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate  
p-Phenylenediamine derivate (CD-4)

· **Risk phrases:**

22 Harmful if swallowed.  
43 May cause sensitisation by skin contact.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

24 Avoid contact with skin.  
37 Wear suitable gloves.  
57 Use appropriate container to avoid environmental contamination.  
2 Keep out of the reach of children.  
29 Do not empty into drains.

## 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 R-phrases**

22 Harmful if swallowed.  
25 Toxic if swallowed.  
31 Contact with acids liberates toxic gas.  
41 Risk of serious damage to eyes.  
43 May cause sensitisation by skin contact.  
48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **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

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

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

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC C-41 Colour Developer Part 3

- **Article number:** 45607, zu102226 Part3, zu102228 Part3, 6523/3 Part 3

- **Application of the substance / the preparation** Developer for photographic use

- **Manufacturer/Supplier:**

TETENAL AG &amp; CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:**



Xi Irritant

- **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.

R 36/38 Irritating to eyes and skin.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements**



Warning

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

- **Prevention:**

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

- **Response:**

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

P321 Specific treatment (see on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

GB

(Contd. on page 2)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 1)

### 3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 584-08-7 EINECS: 209-529-3	potassium carbonate ☒ Xi; R 36/38 Warning: ☠ 3.2/2, 3.3/2	25-50%
CAS: 140-01-2 EINECS: 205-391-3	Sodium diethylene triamine pentaacetic acid (DTPA-Na5) ☒ Xi; R 36 Warning: ☠ 3.3/2	1-5%

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

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.
- **After inhalation:** 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:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 3)



## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 2)

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

- Store away from foodstuffs.
- Store away from oxidizing agents.

· **Further information about storage conditions:**

- 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: 5-25°C
- Protect from exposure to the light.

## 8 Exposure controls/personal protection

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

- **Ingredients 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 valid during the making were used as basis.

- **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.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

- **Respiratory protection:** Not necessary if room is well-ventilated.

- **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

- **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  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.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

Trade name: **COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 3)

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

### 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Odourless

· **Change in condition**

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

· **Flash point:** Not applicable.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Vapour pressure at 20°C:** 23 hPa· **Density at 20°C:** 1.302 g/cm<sup>3</sup>· **Solubility in / Miscibility with water:** Fully miscible.· **pH-value at 20°C:** 11.2· **Solvent content:**

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	37.9 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
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:

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Colour Developer Part 3**

Irritant

(Contd. of page 4)

### 12 Ecological information

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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.

### 13 Disposal considerations

- **Product:**

- **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.

### 14 Transport information

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

- **ADR/RID class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Marine pollutant:** No

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

- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

### 15 Regulatory information

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xi Irritant

- **Risk phrases:**

36/38 Irritating to eyes and skin.

- **Safety phrases:**

2 Keep out of the reach of children.

(Contd. on page 6)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 5)

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

29 Do not empty into drains.

46 If swallowed, seek medical advice immediately and show this container or label.

### 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 R-phrases**

36 Irritating to eyes.

36/38 Irritating to eyes and skin.

· **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

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

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

-GB-

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC E-6/C-41 Bleachfix bath BX Part 1

- **Article number:**

44020, zu102034BXPart1, zu102226BXPart1, zu102228BXPart1, zu102031BXPart1, 6722/1 Part 1

- **Application of the substance / the preparation** Bleachfix preparation for photographic use

- **Manufacturer/Supplier:**

TETENAL AG & CO. KG  
Schützenwall 31-35  
D-22844 Norderstedt / Germany  
Tel.: +49 040 521 45-0  
Fax: +49 040-52145-296  
www.tetenal.com  
E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road  
Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:** Not applicable.

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

The product does not have 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 according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements** Void

### 3 Composition/information on ingredients

- **Chemical characterization**

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

- **Dangerous components:**

CAS: 21265-50-9	Ethylenediaminetetraacetic acid, ferric ammonium complex	25-50%
EINECS: 244-302-2		

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

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

- **After eye contact:** Rinse opened eye for several (15 min) under running water.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

GB

(Contd. on page 2)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 1)

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
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 facilities:** No further data; see item 7.
- **Ingredients 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 valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Avoid contact with the skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 3)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 2)

- Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm  
 Glove material: Neopren with breakthrough time:  $>240$  min, layer thickness:  $>0,65$  mm  
 Gloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ min  
 · **Eye protection:** Safety glasses  
 · **Body protection:** Protective work clothing

### 9 Physical and chemical properties

#### · General Information

<b>Form:</b>	Fluid
<b>Colour:</b>	Dark red
<b>Odour:</b>	Odourless

#### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

· **Flash point:** Not applicable.

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

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

· **Vapour pressure at  $20^{\circ}\text{C}$ :** 23 hPa

· **Density at  $20^{\circ}\text{C}$ :** 1.24 g/cm<sup>3</sup>

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

· **pH-value at  $20^{\circ}\text{C}$ :** 6.8

#### · Solvent content:

<b>Organic solvents:</b>	0.7 %
<b>Water:</b>	59.6 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

(Contd. on page 4)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 3)

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

#### \* 12 Ecological information

- **Additional ecological information:**
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

#### \* 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

09 01 05	bleach solutions and bleach fixer solutions
----------	---

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

#### 14 Transport information

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

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

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

- **UN "Model Regulation":** -

#### 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

#### 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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**Safety Data Sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 4)

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

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

GB

# Safety Data Sheet

## according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

**· Product details****· Trade name:** COLORTEC E-6/C-41 Bleachfix bath BX Part 2**· Article number:**

44021, zu102034BXPart2, zu102228BXPart2, zu102046Part2, zu102031BXPart2, zu102226BXPart2, 6722/1 Part 2

**· Application of the substance / the preparation** Bleachfix preparation for photographic use**· Manufacturer/Supplier:**

TETENAL AG & CO. KG  
Schützenwall 31-35  
D-22844 Norderstedt / Germany  
Tel.: +49 040 521 45-0  
Fax: +49 040-52145-296  
www.tetenal.com  
E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

**· Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com**· Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

**· Hazard description:** Not applicable.**· Information concerning particular hazards for human and environment:**

The product does not have 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 according to the latest editions of the EU-lists, and extended by company and literature data.

**· GHS label elements****Danger**

H318 - Causes serious eye damage.

Safety data sheet available on request.

**· Prevention:**

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

**· Response:**

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 or doctor/physician.

### 3 Composition/information on ingredients

**· Chemical characterization****· Description:** Mixture of substances listed below with nonhazardous additions.

(Contd. on page 2)

GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010








version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2**

(Contd. of page 1)

**· Dangerous components:**

CAS: 7681-57-4 EINECS: 231-673-0	disodium disulphite	 Xn,  Xi; R 22-31-41	1-5%
		Danger:  3.3/1 Warning:  3.1.O/4	
CAS: 64-19-7 EINECS: 200-580-7	acetic acid	 C; R 10-35	0.5-2%
		Danger:  3.2/1A Warning:  2.6/3	

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

#### 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several (15 min) under running water.
- **After swallowing:**  
If symptoms persist consult doctor.  
Rinse out mouth and then drink plenty of water.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur dioxide (SO<sub>2</sub>)
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2**

Recommended storage temperature: 5-25°C

(Contd. of page 2)

### 8 Exposure controls/personal protection

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

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

**7681-57-4 disodium disulphite (1-5%)**

WEL Long-term value: 5 mg/m<sup>3</sup>

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

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Ensure adequate ventilation

· **Protection of hands:**

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:  $\geq 480$  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:** Safety glasses

· **Body protection:** Protective work clothing

### 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Recognizable

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

· **Flash point:** Not applicable.

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

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

(Contd. on page 4)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2**

(Contd. of page 3)

· <b>Vapour pressure at 20°C:</b>	23 hPa
· <b>Density at 20°C:</b>	1.346 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>pH-value at 20°C:</b>	5.4
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	1.4 %
<b>Water:</b>	41.7 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU 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 to our experience and the information provided to us.

### 12 Ecological information

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· <b>European waste catalogue</b>
09 01 05   bleach solutions and bleach fixer solutions

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

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2**

(Contd. of page 4)

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

#### 14 Transport information

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

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

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

- **UN "Model Regulation":** -

#### 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Special labelling of certain preparations:**  
Safety data sheet available for professional user on request.

#### 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 R-phrases**

- 10 Flammable.
- 22 Harmful if swallowed.
- 31 Contact with acids liberates toxic gas.
- 35 Causes severe burns.
- 41 Risk of serious damage to eyes.

- **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

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

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

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** C-41 Stabilizer and Replenisher STAB-BNP

- **Article number:** 45544, zu102228 STAB, 6713/11

- **Application of the substance / the preparation** Stabilizer bath for photographic use

- **Manufacturer/Supplier:**

TETENAL AG &amp; CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:**



Xn Harmful

- **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.

R 42/43 May cause sensitisation by inhalation and skin contact.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements**

**Danger**

H318 - Causes serious eye damage.

**Warning**

H317 - May cause an allergic skin reaction.

- **Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

- **Response:**

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 or doctor/physician.

P321 Specific treatment (see on this label).

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 1)

- **Disposal:**  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 68131-39-5 Polymer	Alcohols, C12-15, ethoxylated ☒ Xn, ☒ Xi, ☒ N; R 22-41-50 Danger: ☠ 3.3/1 Warning: ☠ 4.1.A/1; ☠ 3.1.O/4, 3.1.I/4	1-5%
CAS: 100-97-0 EINECS: 202-905-8	Hexamethylenetetramine ☒ Xi, ☠ F; R 11-43 Warning: ☠ 2.7/2; ☠ 3.4.S/1	1-5%
CAS: 2634-33-5 EINECS: 220-120-9	1,2-benzisothiazolin-3-one ☒ Xn, ☒ Xi, ☒ N; R 22-38-41-43-50 Danger: ☠ 3.3/1 Warning: ☠ 4.1.A/1; ☠ 3.1.O/4, 3.4.S/1; 3.2/2	0.05-2%

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

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.
- **After inhalation:**  
In case of unconsciousness place patient stably in side position for transportation.  
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. If symptoms persist, consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.  
Ensure adequate ventilation.

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(Contd. on page 3)



## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 2)

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Protect from heat.
- **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.
  - 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 facilities:** No further data; see item 7.
- **Ingredients 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 valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - 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.
  - Not necessary if room is well-ventilated.
- **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.

Neoprene gloves

Butyl rubber, BR

Nitrile rubber, NBR

(Contd. on page 4)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 3)

**· Penetration time of glove material**
Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mmGloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ minGlove 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

**· General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light brown
<b>Odour:</b>	Amine-like

**· Change in condition**
**Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** Undetermined.
**· Flash point:** Not applicable.

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

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

**· Vapour pressure at 20°C:** 23 hPa

**· Density at 20°C:** 1.017 g/cm<sup>3</sup>
**· Solubility in / Miscibility with water:** Fully miscible.

**· pH-value at 20°C:** 9.7

**· Solvent content:**
**Organic solvents:** 0.0 %**Water:** 91.3 %

## 10 Stability and reactivity

**· Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**· Materials to be avoided:**
**· Dangerous reactions:** Reacts with acids, alkalis and oxidizing agents.

**· Dangerous decomposition products:** Irritant gases/vapours

## 11 Toxicological information

**· Acute toxicity:**
**· Primary irritant effect:**
**· on the skin:** No irritant effect.

**· on the eye:** No irritating effect.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 4)

- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
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
- **Sensitisation** May cause sensitisation by inhalation and skin contact.

### 12 Ecological information

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

09 01 99	wastes not otherwise specified
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

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

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

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

- **UN "Model Regulation":** -

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xn Harmful

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

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## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 5)

1,2-benzisothiazolin-3-one

**· Risk phrases:**

42/43 May cause sensitisation by inhalation and skin contact.

**· Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

24 Avoid contact with skin.

37 Wear suitable gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

**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 R-phrases**

11 Highly flammable.

22 Harmful if swallowed.

38 Irritating to skin.

41 Risk of serious damage to eyes.

43 May cause sensitisation by skin contact.

50 Very toxic to aquatic organisms.

**· 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

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

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

GB