

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

**TETENAL**

Printing date 28.12.2021

version no: 12

Revision: 28.12.2021

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

Trade name: **C-41 Bleichbad und Regenerator**  
**102664 , 102244**

Article number: 102244, 102664

**Index number:**

None of the ingredients is listed.

UFI: NS45-30AC-Y00X-VVK2

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

Application of the substance / the mixture Bleach bath for photographic use

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

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

**1.4 Emergency telephone number:**

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

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Eye Dam. 1          H318 Causes serious eye damage.  
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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

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

**Hazard pictograms**

GHS05

Signal word Danger

**Hazard-determining components of labelling:**

succinic acid

**Hazard statements**

H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273                      Avoid release to the environment.  
P280                      Wear eye protection / face protection.  
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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P310 Immediately call a POISON CENTER/doctor.  
 P501 Dispose of contents/container in accordance with local regulations.

**Additional information:**

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

**2.3 Other hazards**

**Results of PBT and vPvB assessment**





**PBT:** Not applicable.  
**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**3.2 Chemical characterisation: Mixtures**

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

**Dangerous components:**

CAS: 111687-36-6	Ammonium iron PDTA	10-<25%
ELINCS: 400-660-3	 Aquatic Chronic 2, H411	
Index number: 607-472-00-2		
Reg.nr.: 01-0000015059-70		
CAS: 6484-52-2	ammonium nitrate	5-10%
EINECS: 229-347-8	 Ox. Sol. 1, H271	
CAS: 12124-97-9	ammonium bromide	5-10%
EINECS: 235-183-8	 Eye Irrit. 2, H319	
Reg.nr.: 01-2119931350-50		
CAS: 110-15-6	succinic acid	5-10%
EINECS: 203-740-4	 Eye Dam. 1, H318	
Reg.nr.: 01-2119896114-34		

**Not hazardous components:**

CAS: 7732-18-5	water	50-90%
EINECS: 231-791-2		
CAS: 2226-88-2	Diammonium succinate	1-5%
EINECS: 218-759-3		

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

### SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General information:** Take affected persons out into the fresh air.

**After inhalation:**

Supply fresh air; consult doctor in case of complaints.  
 Supply fresh air.

**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.

**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

**5.1 Extinguishing media**

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- . **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling** No special measures required.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-30°C
- . **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- . **8.1 Control parameters**
- . **Additional information about design of technical facilities:** No further data; see item 7.
- . **Ingredients with limit values that require monitoring at the workplace:**

#### **111687-36-6 Ammonium iron PDTA (10-<25%)**

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>  
Long-term value: 1 mg/m<sup>3</sup>  
as Fe

REL (USA) Long-term value: 1 mg/m<sup>3</sup>  
as Fe

TLV (USA) Long-term value: 1 mg/m<sup>3</sup>  
as Fe

- . **DNELs**

#### **110-15-6 succinic acid**

Oral	Akute - systemic effects, general population	67 mg/kg bw/day (Consumer (Verbraucher))
	Long-term - systemic effects	43 mg/kg bw/day (Consumer (Verbraucher))
Dermal	Long-term - systemic - effects	43 mg/kg bw/day (Worker (Arbeiter))

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Akute -systemische Effekte	67 mg/kg bw/day (Consumer (Verbraucher))
Akute- systemic - effects	67 mg/kg bw/day (Worker (Arbeiter))
Inhalative Akute /short-term exposure - local effects	10 mg/m <sup>3</sup> (Worker (Arbeiter))
Long-term exposure-local effects	10 mg/m <sup>3</sup> (Worker (Arbeiter))
Akute-lokale Effekte	10 mg/m <sup>3</sup> (general population)
Long-term - local effects	10 mg/m <sup>3</sup> (Worker (Arbeiter))
Akute - local systemic	10 mg/m <sup>3</sup> (Worker (Arbeiter))
Long-term - systemic-effects	10 mg/m <sup>3</sup> (Worker (Arbeiter))
Akute long-term effects, polutuion	10 mg/m <sup>3</sup> (Consumer (Verbraucher))

**. PNECs****110-15-6 succinic acid**

Aquatic compartment - freshwater	0.1 mg/l (-)
Aquatic compartment - marine water	0.01 mg/l (-)
Aquatic compartment -water,intermittent releases	1 mg/l (-)
Aquatic compartment -sediment in freshwater	0.079 mg/kg sed dw (-)

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

**. 8.2 Exposure controls****. Personal protective equipment:****. General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.  
Avoid contact with the eyes and skin.

**. Respiratory protection:**

Not required.

Ensure adequate ventilation

**. Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**. Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

**. Penetration time of glove material**

Glove material	breakthroug-time	layer thickness
Butyl rubber:	≥480 min	≥0,4mm
Nitrile rubber:	≥480 min	≥0,38mm
Neoprene:	≥240 min	≥0,65mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**. Eye protection:** Safety glasses

**. Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

**. 9.1 Information on basic physical and chemical properties****. General Information****. Appearance:**

**Form:** Liquid

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<b>Colour:</b>	Brown
<b>Odour:</b>	Nearly odourless
<b>Odour threshold:</b>	Not determined.
<b>pH-value at 20 °C:</b>	4
<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	<0 °C
<b>Initial boiling point and boiling range:</b>	>100 °C
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gas):</b>	Not applicable.
<b>Ignition temperature:</b>	500 °C
<b>Decomposition temperature:</b>	Not determined.
<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure at 20 °C:</b>	23 hPa
<b>Density at 20 °C:</b>	1.16 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Fully miscible.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Water:</b>	65.7 %
<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	30.3 %
<b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- . **10.1 Reactivity** No further relevant information available.
- . **10.2 Chemical stability**
- . **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- . **10.3 Possibility of hazardous reactions** Reacts with acids releasing sulphur dioxide.
- . **10.4 Conditions to avoid** No further relevant information available.
- . **10.5 Incompatible materials:** No further relevant information available.
- . **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

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### SECTION 11: Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity** Based on available data, the classification criteria are not met.
- . **LD/LC50 values relevant for classification:**
- 111687-36-6 Ammonium iron PDTA**
- Oral LD50 >5,000 mg/kg (rat)
- 12124-97-9 ammonium bromide**
- Oral LD50 2,714 mg/kg (rat)
- >2,000 mg/kg (rabbit)
- 110-15-6 succinic acid**
- Oral LD50 6,740 mg/kg (rat)
- Dermal LD50 6,740 mg/kg (rat)
- Inhalative LC50 1,284 mg/l (rat)
- . **Primary irritant effect:**
- . **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- . **Serious eye damage/irritation**
- Causes serious eye damage.
- . **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- . **Additional toxicological information:**
- . **Acute effects (acute toxicity, irritation and corrosivity)**
- 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.
- . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- . **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- . **Carcinogenicity** Based on available data, the classification criteria are not met.
- . **Reproductive toxicity** Based on available data, the classification criteria are not met.
- . **STOT-single exposure** Based on available data, the classification criteria are not met.
- . **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- . **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:**
- 111687-36-6 Ammonium iron PDTA**
- EC50 48 mg/l (daphnia magna (Water flea))
- LC50 96 mg/l (fish: Oncorhynchus mykiss)
- 12124-97-9 ammonium bromide**
- EC50 >1,000 mg/l (Invertebrates)
- 110-15-6 succinic acid**
- EC50 48 mg/l (daphnia magna (Water flea))
- . **12.2 Persistence and degradability** No further relevant information available.
- . **12.3 Bioaccumulative potential** No further relevant information available.
- . **12.4 Mobility in soil** No further relevant information available.
- . **Additional ecological information:**
- . **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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- . **12.5 Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.
- . **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- . **13.1 Waste treatment methods**
- . **Recommendation**  
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
- . **European waste catalogue**
- 20 00 00 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
- 20 01 00 separately collected fractions (except 15 01)
- 20 01 17\* photochemicals
- . **Uncleaned packaging:**
- . **Recommendation:** Disposal must be made according to official regulations.
- . **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

. <b>14.1 UN-Number</b>	. <b>ADR, IMDG, IATA</b>	Void
. <b>14.2 UN proper shipping name</b>	. <b>ADR, IMDG, IATA</b>	Void
. <b>14.3 Transport hazard class(es)</b>	. <b>ADR, ADN, IMDG, IATA</b>	. <b>Class</b>
		Void
. <b>14.4 Packing group</b>	. <b>ADR, IMDG, IATA</b>	Void
. <b>14.5 Environmental hazards:</b>		
. <b>Marine pollutant:</b>	No	
. <b>14.6 Special precautions for user</b>	Not applicable.	
. <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.	
. <b>UN "Model Regulation":</b>	Void	

- . **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- . **Labelling according to Regulation (EC) No 1272/2008** GHS label elements
- . **Directive 2012/18/EU**
- . **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- . **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 65
- . **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
- None of the ingredients is listed.

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- . **REGULATION (EU) 2019/1148**
- . **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
None of the ingredients is listed.
- . **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**  
None of the ingredients is listed.
- . **Regulation (EC) No 273/2004 on drug precursors**  
None of the ingredients is listed.
- . **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
None of the ingredients is listed.
- . **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

- . **Relevant phrases**  
H271 May cause fire or explosion; strong oxidiser.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H411 Toxic to aquatic life with long lasting effects.
- . **Contact:** E: sida@tetenal.com
- . **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Ox. Sol. 1: Oxidizing solids – Category 1  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- . **\* Data compared to the previous version altered.**

### Annex: Exposure scenario

- . **Description of the activities / processes covered in the Exposure Scenario**  
See section 1 of the annex to the Safety Data Sheet.
- . **Conditions of use**
- . **Duration and frequency** 5 workdays/week.
- . **Physical parameters**
- . **Physical state** Fluid
- . **Concentration of the substance in the mixture** The substance is main component.

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- . **Other operational conditions**
- . **Other operational conditions affecting environmental exposure** Use only on hard ground.
- . **Other operational conditions affecting worker exposure**  
Avoid contact with eyes.  
Avoid contact with the skin.  
Avoid long-term or repeated skin contact.
- . **Other operational conditions affecting consumer exposure**  
No special measures required.  
Not required.
- . **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.
- . **Risk management measures**
- . **Worker protection**
- . **Organisational protective measures** No special measures required.
- . **Technical protective measures**  
Use product only in enclosed systems.  
Ensure that suitable extractors are available on processing machines
- . **Personal protective measures**  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the skin.  
Avoid contact with the eyes.  
Tightly sealed goggles  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
No special measures required.
- . **Measures for consumer protection** Ensure adequate labelling.
- . **Environmental protection measures**
- . **Air** No special measures required.
- . **Water** Do not allow to reach sewage system.
- . **Soil** Prevent contamination of soil.
- . **Disposal measures**  
Disposal must be made according to official regulations.  
Ensure that waste is collected and contained.
- . **Disposal procedures**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Dispose of product residues with household waste.
- . **Waste type** Partially emptied and uncleaned packaging
- . **Exposure estimation**
- . **Consumer** Not relevant for this Exposure Scenario.
- . **Guidance for downstream users** No further relevant information available.