

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

TETENAL

Printing date 13.10.2020

version no: 8

Revision: 13.10.2020

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

1.1 Product identifier

Trade name: **RA-4 CD-RCY Part 1**
Colour Developer Regenerator

Article number: 103438, 102400

Index number:

None of the ingredients is listed.

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

No further relevant information available.

Application of the substance / the mixture Developer for photographic use

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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

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

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 Void

Signal word Void

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

Dangerous components:

CAS: 3710-84-7	N,N-diethylhydroxylamine (DEHA)	10-<25%
EINECS: 223-055-4	☞ Flam. Liq. 3, H226; ☞ Aquatic Chronic 2, H411; ☞ Acute Tox. 4,	
Reg.nr.: 01-2119962470-39	H312; Acute Tox. 4, H332; STOT SE 3, H335	
CAS: 111-46-6	diethylene glycol	10-<25%
EINECS: 203-872-2	☞ Acute Tox. 4, H302	
Index number: 603-140-00-6		

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. **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 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.
- . **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- . **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- . **5.2 Special hazards arising from the substance or mixture**
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Sulphur dioxide (SO₂)
- . **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 equipment. Keep unprotected persons away.
Ensure adequate ventilation
- . **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- . **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- . **Information about fire - and explosion protection:**
The product is not flammable.
Keep ignition sources away - Do not smoke.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.

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Protect from heat and direct sunlight.
Protect from exposure to the light.
Store under lock and key and out of the reach of children.
Recommended storage temperature: 5-30°C
. **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

. 8.1 Control parameters

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

102-71-6 Triethanolamine (10-<25%)

TLV (USA) Long-term value: 5 mg/m³

3710-84-7 N,N-diethylhydroxylamine (DEHA) (10-<25%)

TLV (USA) Long-term value: 7.3 mg/m³, 2 ppm

111-46-6 diethylene glycol (10-<25%)

WEL (Great Britain) Long-term value: 101 mg/m³, 23 ppm

WEEL (USA) Long-term value: 10 mg/m³

. **DNELs**

3710-84-7 N,N-diethylhydroxylamine (DEHA)

Oral Long-term - systemic effects 0.13 mg/kg bw/day (Consumer (Verbraucher))

Dermal Long-term - systemic - effects 0.26 mg/kg bw/day (Worker (Arbeiter))

Akute- systemic - effects 4.7 mg/kg bw/day (Worker (Arbeiter))

Inhalative Akute /short-term exposure - local effects 45.6 mg/m³ (Worker (Arbeiter))

Long-term exposure-local effects 3.65 mg/m³ (Worker (Arbeiter))

Long-term - local effects 0.65 mg/m³ (general population- Verbraucher)

Akute - local systemic 2.92 mg/m³ (Worker (Arbeiter))

Long-term - systemic-effects 3.65 mg/m³ (Worker (Arbeiter))

111-46-6 diethylene glycol

Dermal Long-term - systemic - effects 43 mg/kg bw/day (Worker (Arbeiter))

Long-term - systemic effects (dynamic) 21 mg/kg bw/day (general population- Verbraucher)

Inhalative Long-term - local - effects 60 mg/m³ (Worker (Arbeiter))

Long-term - systemic effects 12 mg/m³ (Consumer (Verbraucher))

Long-term- systemics effects 44 mg/m³ (Worker (Arbeiter))

. **PNECs**

3710-84-7 N,N-diethylhydroxylamine (DEHA)

Aquatic compartment - freshwater 0.0082 mg/l (-)

Aquatic compartment - marine water 0.00082 mg/l (-)

Aquatic compartment -water,intermittent releases 0.082 mg/l (-)

Aquatic compartment -sediment in freshwater 0.0652 mg/kg sed dw (-)

Aquatic compartment -sediment in marine water 0.00652 mg/kg sed dw (-)

Terrestrial compartment -soil 0.0082 mg/kg dw (-)

Sewage treatment plant (Abwasserreinigungsanlagen) 10 mg/l (-)

111-46-6 diethylene glycol

Aquatic compartment - freshwater 10 mg/l (-)

Aquatic compartment - marine water 1 mg/l (-)

Aquatic compartment -water,intermittent releases 10 mg/l (-)

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Aquatic compartment -sediment in freshwater 20.9 mg/kg sed dw (-)

Terrestrial compartment -soil 1.53 mg/kg dw (-)

Sewage treatment plant (Abwasserreinigungsanlagen) 199.5 mg/l (-)

. **Additional information:** The lists valid during the making were used as basis.. **8.2 Exposure controls**. **Personal protective equipment:**. **General protective and hygienic measures:**

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

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.

No personal respiratory protection required. In case of insufficient ventilation, excess of workplace limits, excessive odor or dusts, fibers and fumes, use self-contained breathing apparatus or breathing apparatus with filter type P2 or P3 according to EN 143.

Use suitable respiratory protective device only when aerosol or mist is formed.

Ensure adequate ventilation

. **Protection of hands:**

Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

. **Material of gloves**

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

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

. **Penetration time of glove material**

Glove material breakthrough-time layer thickness

Butyl rubber: ≥480 min ≥0,4mm

Nitrile rubber: ≥480 min ≥0,38mm

Neoprene: ≥240 min ≥0,65mm

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

. **Eye protection:** Goggles recommended during refilling. **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

. **9.1 Information on basic physical and chemical properties**. **General Information**. **Appearance:**. **Form:** Fluid. **Colour:** Light yellow. **Odour:** Amine-like. **Odour threshold:** Not determined.

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. pH-value at 20 °C:	11
. Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	>100 °C
. Flash point:	Not applicable.
. Flammability (solid, gas):	Not applicable.
. Ignition temperature:	230 °C
. Decomposition temperature:	Not determined.
. Auto-ignition temperature:	Product is not selfigniting.
. Explosive properties:	Product does not present an explosion hazard.
. Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
. Vapour pressure:	Not determined.
. Density at 20 °C:	~1 g/cm ³
. Relative density	Not determined.
. Vapour density	Not determined.
. Evaporation rate	Not determined.
. Solubility in / Miscibility with water:	Fully miscible.
. Partition coefficient: n-octanol/water:	Not determined.
. Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
. Solvent content:	
Organic solvents:	46.6 %
Water:	25-50 %
Solids content:	0.0 %
. 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- . 10.1 Reactivity No further relevant information available.
- . 10.2 Chemical stability
- . Thermal decomposition / conditions to be avoided: Stable at environment temperature.
- . 10.3 Possibility of hazardous reactions No dangerous reactions known.
- . 10.4 Conditions to avoid No further relevant information available.
- . 10.5 Incompatible materials: No further relevant information available.
- . 10.6 Hazardous decomposition products:
Irritant gases/vapours
Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects
- . Acute toxicity Based on available data, the classification criteria are not met.

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LD/LC50 values relevant for classification:

3710-84-7 N,N-diethylhydroxylamine (DEHA)

Oral LD50 2,190 mg/kg (rat)

Dermal LD50 1,300 mg/kg (rabbit)

Inhalative LC50 4 mg/l (rat)

111-46-6 diethylene glycol

Oral LD50 12,565 mg/kg (rat)

Primary irritant effect:

• **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

• **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

• **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

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:

3710-84-7 N,N-diethylhydroxylamine (DEHA)

EC50 48 mg/l (daphnia magna (Water flea))

96 mg/l (fish: Pimephales promelas) (OECD 203)

LC50 96 mg/l (fish: Pimephales promelas)

111-46-6 diethylene glycol

EC50 24 mg/l (daphnia magna (Water flea))

LC50 96 mg/l (Invertebrates)

• **12.2 Persistence and degradability** No further relevant information available.

• **12.3 Bioaccumulative potential** No further relevant information available.

• **12.4 Mobility in soil** No further relevant information available.

Ecotoxicological effects:

• **Remark:** Harmful to fish

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.

Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

09 01 01 water-based developer and activator solutions

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

SECTION 14: Transport information

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

SECTION 15: Regulatory information

- . **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**
- . **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3**
- . **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**

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H332 Harmful if inhaled.
- H335 May cause respiratory 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 européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity - dermal – Category 4
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
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.**

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