

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

Printing date 02.06.2015

Version 2

Revision: 02.06.2015


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

- **1.1 Product identifier**
- **Trade name: R 50-TC Reproentwickler-Pulver**

- **Article number: 50056**
- **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** Photographic developer
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ADEFO-CHEMIE GmbH
Justus-von-Liebig-Str. 24-26
D-63128 Dietzenbach
Tel.: +49 6074 84239-0
Fax: +49 6074 84239-63
E-Mail: service@adefo-chemie.de
www.adefo-chemie.de
- **Informing department:**
Tel.: +49 6074 84239-0
Fax: +49 6074 84239-63
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

 - **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**
- 

GHS07
- **Signal word** Warning
 - **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
 - **Precautionary statements**
P280 Wear protective gloves / eye 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.
P302+P352 IF ON SKIN: Wash with plenty of water.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
 - **Additional information:**
Contains 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one. May produce an allergic reaction.

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

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36-xxxx	potassium carbonate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	50-75%
CAS: 6381-77-7 EINECS: 228-973-9 Reg.nr.: 01-2120009701-69-xxxx	sodium isoascorbate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	20-25%
CAS: 139-89-9 EINECS: 205-381-9 Reg.nr.: 01-2119972845-22-xxxx	trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate) ⚠ Eye Irrit. 2, H319	0.5-2.0%
CAS: 13047-13-7 EINECS: 235-920-3	4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one ⚠ Aquatic Chronic 2, H411 ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.5-2.0%

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information**
Personal protection for the First Aider.
Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 minutes).
Remove contact lenses, if present and easy to do.
Use eye protection.
Call a doctor immediately.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
- **4.2 Most important symptoms and effects, both acute and delayed**
No known symptoms to date.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
sulphur dioxide (SO₂)
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
At formation of toxic gases:
Put on breathing apparatus.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Avoid causing dust.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Wear protective clothing.
Prevent formation of dust.
Avoid contact with skin, eye and clothing.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Keep container tightly closed in a cool, well-ventilated place.
- **Information about storage in one common storage facility:**
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
- **Recommended storage temperature:** 5-25 °C
- **Storage class**
LGK 13
(German Technical Rule for Hazardous Substance – TRGS 510)

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

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 The usual precautionary measures should be adhered to general rules for handling chemicals.
 Do not inhale dust / smoke / mist.
 Keep away from foodstuffs, beverages and food.
 Do not eat, drink or smoke while working.
 Take off immediately all contaminated clothing.
 Wash contaminated clothing before reuse.
 Wash hands during breaks and at the end of the work.
 Avoid contact with the eyes and skin.
- **Breathing equipment:**
 Use breathing protection in case of insufficient ventilation.
 Filter P2.
 Filter P3.
- **Protection of hands:**
 Protective gloves.
 The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.
 This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
 Only use chemical-protective gloves with CE-labelling of category III.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

 Avoid natural rubber gloves.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
 Synthetic gloves
 Value for permeation: Level:
 ≥ 3 (60 min)
- **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:	Crystalline powder
Colour:	Colourless
Odour:	Not characteristic

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- | | |
|--|--|
| · pH-value (150 g/l) at 20 °C: | 10.7 |
| · Change in condition | |
| Melting point/Melting range: | Not determined |
| Boiling point/Boiling range: | Not determined |
| · Flash point: | Not applicable |
| · Self-inflammability: | Product is not selfigniting. |
| · Danger of explosion: | Product is not explosive. |
| · Density | Not determined |
| · Solubility in / Miscibility with Water: | Soluble |
| · Solvent content: | |
| Solids content: | 100.0 % |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids
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:** Sulphur dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values that are relevant for classification:**

584-08-7 potassium carbonate

Oral LD50 1870 mg/kg (rat)

6381-77-7 sodium isoascorbate

Oral LD50 > 5000 mg/kg (rat)

139-89-9 trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate)

Oral LD50 >5000 mg/kg (rat)

13047-13-7 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one

Oral LD50 565 mg/kg (rat)

Dermal LD50 > 2000 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritant effect.

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- **Respiratory or skin sensitisation**
Sensitising effect by skin contact is possible by prolonged exposure.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Mixtures as issued in the latest version:
Harmful
Irritant
This statement was deduced from the properties of the single components.

SECTION 12: Ecological information• **12.1 Toxicity**• **Aquatic toxicity:****584-08-7 potassium carbonate**

EC50/48 h 380-820 mg/l (Daphnia magna)

LC50/96 h 310-750 mg/l (Pimephales promelas)

13047-13-7 4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one

LC50/96 h 1 - 10 mg/l (Pimephales promelas)

- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** No further relevant information available.
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.
At present there are no ecotoxicological assessments.
This statement was deduced from the properties of the single components.
- **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 of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated under adherence to official regulations.

• **European waste catalogue**

09 01 01* water-based developer and activator solutions

• **Uncleaned packagings:**• **Recommendation:**

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

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- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|---|--|
| · 14.1 UN-Number
· ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· ADR
· ADN, IMDG, IATA | Void
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: | Not applicable. |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | - |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - Directive 2012/18/EU
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): weakly water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H302 Harmful if swallowed.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319 Causes serious eye irritation.
 - H335 May cause respiratory irritation.
 - H411 Toxic to aquatic life with long lasting effects.
- **Recommended restriction of use** No public product, only for commercial use

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· 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)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· Sources

applicable EEC directives:

- 1907/2006
- 1272/2008

Internal physical tests, MSDS of the ingredients,
Information system on hazardous substances of the German Social Accident Insurance
(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

· * Data compared to the previous version altered.

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