

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 03.06.2010

version no: 1

Revision: 03.06.2010

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

- **Product details**

- **Trade name:** Roentoroll 25 RTU 2x5L, ready-to-use solution
- **Article number:** 104025, 44625, 1362/1
- **Application of the substance / the preparation** Developer for X-ray films

- **Manufacturer/Supplier:**

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- **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 40 Limited evidence of a carcinogenic effect.

R 43 May cause sensitisation by skin contact.

R 68 Possible risk of irreversible effects.

- **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

H341 - Suspected of causing genetic defects.

H351 - Suspected of causing cancer.



Warning

H319 - Causes serious eye irritation.

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.

P321 Specific treatment (see on this label).

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· **Storage:**
P405 Store locked up.

· **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: 123-31-9 EINECS: 204-617-8	Hydroquinone (1,4-dihydroxybenzene) Carc. Cat. 3, Muta. Cat. 3; ☒ Xn, ☒ Xi, ☒ N; R 22-40-41-43-68-50 Danger: ☠ 3.3/1 Warning: ☠ 3.5/2, 3.6/2; ☠ 4.1.A/1; ☠ 3.1.O/4, 3.4.S/1	<2.5%
CAS: 111-46-6 EINECS: 203-872-2	diethylene glycol ☒ Xn; R 22 Warning: ☠ 3.1.O/4	0.5-2%
CAS: 111-30-8 EINECS: 203-856-5	glutaral ☒ T, ☒ C, ☒ N; R 23/25-34-42/43-50 Danger: ☠ 3.1.O/3, 3.1.I/3; ☠ 3.4.R/1; ☠ 3.2/1B Warning: ☠ 4.1.A/1; 3.4.S/1	0.5-2%
CAS: 140-01-2 EINECS: 205-391-3	Sodium diethylene triamine pentaacetic acid (DTPA-Na5) ☒ Xi; R 36 Warning: ☠ 3.3/2	0.5-2%
CAS: 13047-13-7 EINECS: 235-920-3	4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one ☒ Xn, ☒ Xi, ☒ N; R 22-36-43-51/53 Warning: ☠ 3.1.O/4, 3.3/2, 3.4.S/1 ☠ 4.1.C/2	0.5-2%

· **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.

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. Then consult a doctor.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

5 Fire-fighting measures

· **Suitable extinguishing agents:**

CO₂, 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.

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- **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).
 - Dispose contaminated material as waste according to item 13.
 - Pick up mechanically.
 - 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.
 - Store away from oxidizing agents.
- **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
 - Protect from exposure to the light.
 - Store under lock and key and out of the reach of children.
 - Recommended storage temperature: 5-25°C



8 Exposure controls/personal protection

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

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

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

WEL Long-term value: 0.5 mg/m³

111-46-6 diethylene glycol (0.5-2%)

WEL Long-term value: 101 mg/m³, 23 ppm

111-30-8 glutaral (0.5-2%)

WEL Short-term value: 0.2 mg/m³, 0.05 ppm

Long-term value: 0.2 mg/m³, 0.05 ppm

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- **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

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Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

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.

required at the appearance from fumes/vapours/aerosol. Filter ABEK

· **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: ≥ 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

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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**

Form:	Fluid
Colour:	According to product specification
Odour:	Characteristic

· **Change in condition**

Melting point/Melting range: Undetermined.

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

· **Flash point:** Not applicable.

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· 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:	1.074 g/cm ³
· Solubility in / Miscibility with water:	Fully miscible.
· pH-value at 20°C:	10.3
· Solvent content:	
Organic solvents:	1.6 %
Water:	88.1 %
· Solids content:	10.1 %

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:**

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

Oral	LD50	320 mg/kg (rat)
Dermal	LD50	>900 mg/kg (rat)
	LD50	72h: 1 mg/l (alg)

- **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:
Irritant
- **Sensitisation** May cause sensitisation by skin contact.

12 Ecological information

- **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.

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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
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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.

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:**

Hydroquinone (1,4-dihydroxybenzene)

· **Risk phrases:**

40 Limited evidence of a carcinogenic effect.

43 May cause sensitisation by skin contact.

68 Possible risk of irreversible effects.

· **Safety phrases:**

2 Keep out of the reach of children.

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

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

36/37 Wear suitable protective clothing and gloves.

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



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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.
- 23/25 Toxic by inhalation and if swallowed.
- 34 Causes burns.
- 36 Irritating to eyes.
- 40 Limited evidence of a carcinogenic effect.
- 41 Risk of serious damage to eyes.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 43 May cause sensitisation by skin contact.
- 50 Very toxic to aquatic organisms.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 68 Possible risk of irreversible effects.

· **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.**