

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

- Identification of the product:

Trade name: Rollei RPX-D

- Use of the substance/preparation: photographic developing agent, particularly for pictorial development of black and white films.

- Manufacturer/distributor identification

Manufacturer: SPUR, Dipl.-Ing. H. Schain & Partner,
Johannes-Haack-Str. 2, 52379 Langerwehe, Germany
Branch: Grüner Weg 28, 52070 Aachen, Germany
Phone: +49(0)2423-6198 and +49(0)241-93678711
Fax: +49(0)2423-406980 and +49(0)241-93678713
Email: schain@spur-photo.com

Distributor: Hans O. Mahn GmbH & Co. KG
MACO PHOTO PRODUCTS
Brookstieg 4
22145 Stapelfeld
Phone: +49(0)40-237008-88
Fax: +49(0)40-237008-488
Email: photo@mahn.net

- Further information: +49(0)40-237008-88 and +49(0)241-93678711

- Competent person, responsible for Safety Data Sheet (email):

schain@spur-photo.com (manufacturer, management)

- Emergency telephone (Germany): +49(0)30-19240 (Berlin poison control centre for symptoms of intoxication and embryonal toxicology)

2. Hazards identification



Xn: Harmful



Xi: Irritant



N: Dangerous for the environment

- Specific information on dangers for humans and the environment:

R 21/22 Harmful in contact with skin, Harmful if swallowed; R 36/38 Irritating to eyes, Irritating to skin; R 43 May cause sensitization by skin contact; R 52 Harmful to aquatic organisms.

- Classification system:

The product has to be labelled due to the calculation procedure of the "General Classification Guideline for preparations of the EC in its latest valid edition.

3. Composition/Information on ingredients

- Chemical characterisation: aqueous solution

- Hazardous ingredients:

Potassium carbonate: EINECS: 209-529-3; CAS-RN: 584-08-7

Percentage: < 8 %

Classification: Xi: Irritant; R 36/37/38

Diethylene glycol: EINECS: 203-872-2; CAS-RN: 111-46-6

Percentage: < 4.5 %

Classification: Xn: Harmful; R 22

Trilon C: EINECS: 205-391-3; CAS-RN: 140-01-2

Percentage: < 1 %

Classification: Xi: Irritant, N: Hazardous for the environment: R 36-51/53

Hydroquinone sulfonic acid (potassium salt): EINECS: 244-584-7; CAS-RN: 21799-87-1

Percentage: < 2 %

Classification: Xi: Irritant; R 36-43

4-Hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidone: EINECS: 235-920-3; CAS-RN: 13047-13-7

Percentage: < 0.5 %

Classification: Xn: Harmful; R 22-43

Potassium thiocyanate: EINECS: 206-370-1; CAS-RN: 333-20-0

Percentage: < 0.8 %

Classification: Xn: Harmful; R 20/21/22, R 32, R52/53

Sodium Tetraborate Decahydrate: EINECS: 215-540-4; CAS-RN: 1303-96-4

Percentage: < 1 %

Classification: T: Toxic; repr. cat 2; R 60-61

- Additional reference: The wording of the hazard warnings (i.e. the 'risk-phrases' Rn) can be looked up under section 16.

4. First-aid measures

- General information: Remove items of clothing contaminated by the product immediately.
- Inhalation: Move affected person to fresh air and keep at rest. In case of persistent complaints seek medical advice.
- Skin contact: Wash off thoroughly with plenty of water.
- Eye contact: Remove contact lenses, open eyelids, flush thoroughly with water and consult a doctor.
- Ingestion: If swallowed, rinse mouth and drink plenty of water. Do not induce vomiting. Seek medical advice.
- Special information for your doctor: None.

5. Fire-fighting-measures

- Suitable extinguishing media: CO₂, extinguishing powder, water spray. Fight larger fires with water spray jets or alcohol-resistant foam.
- Non suitable extinguishing media: None
- Hazardous combustion products: sulphur dioxide
- Protective equipment: Do not inhale explosion and combustion gases. Wear breathing apparatus and protective clothing.
- Particular fire and explosion hazards: None

6. Accidental release measures

- Personal precautions: Provide for sufficient ventilation.
- Environmental precautions: Do not empty into drains; prevent the product from contaminating surface or ground water. If waters or sewage are contaminated, report to the competent authorities. Dilute with plenty of water.
- Methods for cleaning up: Absorb with a liquid-binding agent (sand, mountain flour, sSurebinder, universal binding agent, sawdust). Sweep up and store in suitable container, dispose of contaminated material as waste labelled according to waste law in force.
- Additional information: Flush residues with water.

7. Handling and storage

- Handling:

- Safe handling: Provide for proper ventilation in work area. Avoid long-term and repeated skin contact; no special measures required if used properly.
- Fire and explosion control: No special measures required.

- Storage:

- Storage facilities and containers: No specific requirements.
- Storage with other substances: Do not store with acids, strong oxidants, and food.

- Further information on storage conditions:

- Store in well-sealed containers cool and dry. Do not expose to light and heat. Keep locked up and store away from children. Recommended storage temperature: 5 to 15°C / 41 to 59°F.

- Storage class:

- Classification according to Ordinance on Industrial Safety and Health: -

8. Exposure controls/personal protection

- Additional information for system design: None

- Components with workplace-specific control parameters:	
111-46-6 Diethylene glycol	
MAC (Germany)	44 mg/m ³ ; 10 ml/m ³ 4 (I); DFG, Y
1303-96-4 Sodium Tetraborate Decahydrate	
MAC (Germany)	0.5 mg/m ³ 2 (I); AGS, Y, 10; boric acid and sodium borates

- Personal protective equipment:
General protection and hygiene measures: Wash hands before breaks and end of work. Do not inhale gases, vapours, or aerosols. Avoid skin and eye contact.
Respiratory protection: Not required.
Hand Protection: Wear protective gloves made from materials impermeable and resistant to the product/substance/preparation. The materials have to be chosen with due regard to penetration times, permeation rates, and degradation.
Glove material: The choice of a suitable glove not only depends on the material, but also on further quality features and may vary from manufacturer to manufacturer. As the product is a preparation composed of a number of substances, the stability of the glove materials is not predictable and, therefore, needs to be tested before use. The liquid tightness of the glove has to be tested before it is used again. Due to a lack of testing, no glove material can be recommended for the product/substance/preparation.
Penetration time of the glove material: The exact breakthrough time can be given by the protective gloves manufacturer and is to be observed.
Eye Protection: Wear safety goggles.
Skin/body protection: Wear protective clothing.

9. Physical and chemical properties

- General information Appearance: Colour: Odour:	liquid colourless to light yellow specific
- Change of state Melting point/range Boiling point/range	not determined > 100°C / > 212° F
- Flash point	not applicable
- Auto-flammability	no ~
- Explosive properties	none
- Vapour pressure at 20°C/68°F	no data
- Density at 20°C/68°F	1.22 g/cm ³
- Solubility in/miscibility with water	complete
- pH-value at 20°C/68°F	10.45
- Solvent content Organic solvent: Water: VOC (EU):	0.0 % 78.4 % 0.0 %
- Solids content	21.6 %

10. Stability and reactivity

- Thermal decomposition/conditions to avoid:
No decomposition when used properly.
- Materials to avoid: Strong acids and oxidising agents
- Hazardous reactions: No hazardous reactions known.
- Hazardous decomposition products: No hazardous decomposition products known.

11. Toxicological information

- Acute toxicity

- Classification relevant LD/LC50 values:	
13047-13-7 4-Hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidone	
Oral: LD50	1000 mg/kg (rat)
Dermal: LD50	> 2000 mg/kg (rat)
333-20-0 Potassium thiocyanate	
Oral: LD50	854 mg/kg (rat)
111-46-6 Diethylene glycol	
Oral: LD50	12565 mg/kg (rat)
Oral: LDLo	1000 mg/kg (human)
1303-96-4 Sodium Tetraborate Decahydrate	
Oral: LD50	2660 mg/kg (rat)
Dermal: LD50	> 2000 mg/kg (rabbit)
584-08-7 Potassium carbonate	
Oral: LD50	> 2000 mg/kg (rat)
21799-87-1 Hydroquinone sulfonic acid (potassium salt)	
Oral: LD50	> 10000 mg/kg (rat)
Oral: LD50	> 5000 mg/kg (rabbit)

- Primary irritant effect:
- Skin: Irritant effect.
- Eye: Irritant effect.
- Sensitisation: May cause sensitisation by skin contact.

12. Ecological information

- Ecotoxicity

- Aquatic toxicity	
13047-13-7 4-Hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidone	
EC50	24h: 7.1 ppm (daphnia magna)
LC50	1 – 10mg/l (fish pimephales promelas)
LC50	35 mg/l (fish leuciscus idus l.)
LC50	96h: 32 ppm (fish oncorhynchus mykiss)
333-20-0 Potassium thiocyanate	
EC50	48h: 11mg/l (daphnia magna)
LC50	96h: 100mg/l (fish oncorhynchus mykiss)

- Remark: Harmful to fish

- General Information:

Water hazard class 2 (self-assessment according to VwVwS(German administrative regulation regarding water pollutants)): Hazardous to water.

Do not empty into drains; do not let product contaminate ground water, waters or sewage.

Harmful to aquatic organisms.

13. Disposal considerations

- Product:
- Recommendation: Do not dispose of the product through household waste. Do not let product contaminate sewage.

- European Waste Directory

090101	water-based developer and activator solutions
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- Uncleaned packaging
- Recommendation: Disposal according to official regulations and requirements.
- Recommended cleaning agent: Water, if necessary, with cleaning agent.

14. Transport information

- Land transport ADR/RID and GGVS/GGVE (cross-border/inland):

- ADR/GGVS/E class: -

- Maritime transport IMDG/GGVSea:

- IMDG/GGVSea-class: -

- Marine pollutant: No

- Air transport ICAO-TI and IATA-DGR:

- ICAO/IATA class: -

- UN "Model Regulation": -

15. Regulatory information

Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

- Symbol: Xn;
- R-phrases: R 21/22 Harmful in contact with skin. Harmful if swallowed;
R 36/38 Irritating to eyes. Irritating to skin; R 43 May cause sensitization by skin contact; R 52 Harmful to aquatic organisms.
- S-phrases: S 2 Keep out of the reach of children; S 24 Avoid contact with skin; S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice; S 29 Do not empty into drains; S 46 If swallowed, seek medical advice immediately and show this container or label.

Special designation of certain preparations: -

National regulations

Classification according to Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung: BetrSichV): -

Water hazard class: water hazard class 2 (self-assessment): hazardous to water

16. Other information

The data given in this safety data sheet is based on our present knowledge. It does not guarantee any specific product features and does not establish a contractual legal relationship.

- Relevant R-phrases

- R 20/21/22 Harmful by inhalation. Harmful in contact with skin. Harmful if swallowed.
- R 21/22 Harmful in contact with skin. Harmful if swallowed.
- R 22 Harmful if swallowed.
- R 32 Contact with acids liberates very toxic gas.
- R 36 Irritating to eyes.
- R 36/38 Irritating to eyes. Irritating to skin.
- R 36/37/38 Irritating to eyes. Irritating to respiratory system. Irritating to skin.
- R 43 May cause sensitization by skin contact.
- R 51/53 Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
- R 52 Harmful to aquatic organisms.
- R 52/53 Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
- R 60 May impair fertility.
- R 61 May cause harm to the unborn child.

- Responsible for data sheet: manufacturer, management

- Person of contact: Dipl.-Ing. Heribert Schain

- Abbreviations and Acronyms

ADR: Accord europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Reglement internationale concernent 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

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LDLo Lethal dose low

EC50 half maximal effective concentration