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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 Photochemie Dr. Heidrich und Schain GbR Schmiedestr. 31, 52379 Langerwehe Germany Phone: 0049 (0)2423-6198 Fax: 0049 (0)2423-406980 Email: <u>schain@spur-photo.com</u>
- 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: <u>photo@mahn.net</u>

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

- 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)

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2. Hazards identification

- Classification of the substance or mixture
- Classification according to regulation (EC) No. 1272/2008

Acute Tox. 4 H 302 Harmful if swallowed Skin Irrit. 2 H 315 Causes skin irritation Skin sens. 1 H 317 May cause an allergic skin reaction Eye Irrit. 2 H 319 Causes serious eye irritation Aquatic Chronic 3 H 412 Harmful to aquatic life with long lasting effects

- Labelling elements

- Labelling according to regulation (EC) No. 1272/2008

The mixture is classified and labelled according to the CLP Regulation

- Hazard pictogram



- Signal word: Warning
- Hazard statements
- H 302 Harmful if swallowed
- H 315 Causes skin irritation
- H 317 May cause an allergic skin reaction
- H 319 Causes serious eye irritation
- H 412 Harmful to aquatic life with long lasting effects
- Precautionary statements

P 273 Avoid release to the environment

P 301 + P 312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell P 302 + P 352 IF ON SKIN: Wash with plenty of soap and water

P 305 + P 351 + P 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P 337 + P 313 If eye irritation persists: Get medical advice/attention

- Other hazards
- Results of the PBT and vPvB assessments
- PBT: not applicable
- vPvB: not applicable

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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 according to Regulation (EC) No. 1272/2008: Skin Irrit. 2 H 315; Eye Irrit. 2 H 319; STOT SE 3 H 335

Diethylene glycol: EINECS: 203-872-2; CAS-RN: 111-46-6 Percentage: < 4.5 % Classification according to Regulation (EC) No. 1272/2008: STOT RE 2 H 373; Acute Tox. 4 H 302

Trilon C: EINECS: 205-391-3; CAS-RN: 140-01-2 Percentage: < 1 % Classification according to Regulation (EC) No. 1272/2008: Acute Tox. (inhalative) 4 H 332; Repr. Lact. 2 H 361

Hydroquinone sulfonic acid (potassium salt): EINECS: 244-584-7; CAS-RN: 21799-87-1 Percentage: < 2 % Classification according to Regulation (EC) No. 1272/2008: Eye Irrit. 2 H 319; Skin Sens. 1 H 317

4-Hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidone: EINECS: 235-920-3; CAS-RN: 13047-13-7 Percentage: < 0.5 % Classification according to Regulation (EC) No. 1272/2008: Acute Tox. 4 H 302; Skin Sens. 1 H 317 ; Aquatic Chronic 2 H 411

Potassium thiocyanate: EINECS: 206-370-1; CAS-RN: 333-20-0 Percentage: < 0.8 % Classification according to Regulation (EC) No. 1272/2008: Acute Tox. 4 H 302; H 312; H 332; Aquatic Chronic 3 H 412

Sodium Tetraborate Decahydrate: EINECS: 215-540-4; CAS-RN: 1303-96-4 Percentage: < 1 % Classification according to Regulation (EC) No. 1272/2008: Repr. 1B H 360; Eye Irrit. 2 H 319

- Additional reference: The wording of the hazard warnings can be looked up under section 16.

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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.

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- 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 $15^{\circ}C / 41$ to $59^{\circ}F$.

- 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.

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9. Physical and chemical properties

- General information	
Appearance:	liquid
Colour:	colourless to light yellow
Odour:	specific
- Change of state	
Melting point/range	not determined
Boiling point/range	$> 100^{\circ}C / > 212^{\circ}F$
- 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:	0.0 %
Water:	78.4 %
VOC (EU):	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.

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11. Toxicological information

- Acute toxicity

- Classification relevant LD/LC50 values:				
	13047-13-7 4-Hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidone			
Oral:		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

2000000000		
- 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)	
Pomerk: Hermful to fish		

- 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.

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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

- 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 mixture is classified and labelled according to the CLP Regulation (EC) No. 1272/2008:

- Hazard pictogram



- Signal word: Warning
- Hazard statements
- H 302 Harmful if swallowed
- H 315 Causes skin irritation
- H 317 May cause an allergic skin reaction
- H 319 Causes serious eye irritation
- H 412 Harmful to aquatic life with long lasting effects

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- Precautionary statements

P 273 Avoid release to the environment

P 301 + P 312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell P 302 + P 352 IF ON SKIN: Wash with plenty of soap and water

P 305 + P 351 + P 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P 337 + P 313 If eye irritation persists: Get medical advice/attention

Special designation of certain preparations: -

National regulations: Classification according to Ordinance on Industrial Safety and Health (BetrSichV): -Water hazard class (according VwVwS): 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 H statements:

- H 302 Harmful if swallowed
- H 314 Causes severe skin burns and eye damage
- H 315 Causes skin irritation
- H 317 May cause an allergic skin reaction
- H 319 Causes serious eye irritation
- H 332 Harmful if inhaled
- H 335 May cause respiratory irritation
- H 360 May damage fertility or the unborn child
- H 361 Suspected of damaging fertility or the unborn child
- H 373 May cause damage to organs through prolonged or repeated exposure
- H 411 Toxic to aquatic life with long lasting effects
- H 412 Harmful to aquatic life with long lasting effects

- Responsible for data sheet: manufacturer, management

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

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- Abbreviations and Acronyms

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