FUJIFILM

SAFETY DATA SHEET

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name **UNIPACK PRO 108 P1R**
1.2 Product Code: **822370 / 722370**
1.3 Recommended Use and Restriction on Use: For processing of photographic colour paper.
1.4 Manufacturer: FUJIFILM Asia Pacific Pte. Ltd.
UEN: 199301558N
1.5 Address: 15 Tuas Avenue 7
Singapore 639270
1.6 Business Phone Number: (65) 6862 2116 (Operating hours: 0830-1730 hours Mondays-Fridays)
Fax: (65) 6861 4829
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SECTION 2: HAZARDS IDENTIFICATION

2.1 GHS Classification:

Hazard Class	Hazard Category	Hazard Statement
Corrosive to metals	Category 1	May be corrosive to metals.
Skin corrosion/irritation:	Category 2	Causes skin irritation.
Serious eye damage/irritation:	Category 2	Causes serious eye irritation.

2.2 GHS label elements
Pictograms:

2.2 Signal Word: Warning

2.3 Precautionary Statements:
Prevention
Keep only in original container.
Wash your hands and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response
Absorb spillage to prevent material damage.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Storage
Store in corrosive resistant container with a resistant inner liner.

2.4 Disposal:
None.

Other Hazards Which Do Not Result in Classification

Primary Hazards
None.

Specific Hazards
None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance or Preparation: This product is a mixture.

Chemical Name	CAS No.	% by Weight
Water	7732-18-5	60 - 80
Potassium carbonate	584-08-7	7 - 15
Aryl sulphonate	657-84-1	1 - 5
Polyethylene Glycol	25322-68-3	1 - 5
EDTA, tetrapotassium salt	5964-35-2	1 - 5
Hydroxylamine derivative	133986-51-3	1 - 5
Para-phenylenediamine derivative	92-09-1	1 - 5
Potassium sulfate	7778-80-5	1 - 5
Triethanolamine	102-71-6	1 - 5
Sodium hydroxide	1310-73-2	0.5 - 1.5
Potassium hydroxide	1310-58-3	0 - 0.1

SECTION 4: FIRST-AID MEASURES

4.1 Inhalation:
- Move the victim into the fresh air, keep him or her warm and quiet, cover with a blanket, and send for immediate medical assistance.
- If the victim is not breathing or is breathing very weakly, loosen his or her clothing in order to secure an airway and begin artificial respiration.
- If the casualty is unconscious, but breathing, or is conscious but experiencing breathing difficulties, the provision of oxygen is effective. It is preferable to do this under medical supervision.
- No medicine other than oxygen may be dispensed. No food may be given to the victim without the physician's direction.

4.2 Skin Contact:
- If it is spilled on the skin, wash off with copious amounts of soap and water.
- Remove the contaminated clothes, shoes, etc., immediately. Cut the clothing off if necessary. Subsequently, rinse the skin with cool or tepid running water for at least 30 minutes.
- Immediate medical attention is required.

4.3 Eye Contact:
- If a contact lens is in place, remove it and wash the eye with warm running water for at least 15 minutes, unless the lens is firmly attached to the eye. Use physiological saline if it is readily available.
- Do not stop rinsing the eye. During the rinse, open the eyelid with your fingers so that water can reach under the eyelid. Send for an ophthalmologist immediately. An ophthalmological examination is absolutely essential because the possibility exists that there may be after effects even if there are no immediate pain or vision problems.

4.4 Ingestion:
- If it is swallowed, call a doctor immediately.
- Do not attempt to make the victim vomit.
- Rinse the mouth out thoroughly with water.
- Give the casualty 1-2 glasses of water to dilute the quantity of the substance in the stomach. (If milk is readily available, this can be given to the casualty after the water.)
- If the victim vomits of his/her own accord, bend his/her body so as to prevent vomit from entering the lungs. After vomiting, allow the victim to drink more water. Keep the victim warm and send for a doctor immediately and show SDS or label.

4.5 Likely Acute or Delayed:
- None.

4.6 Note to Physician:
- None.

4.7 Protection of First-Aid Providers:
- First-aid personnel should wear personal protection equipment when assisting the casualty.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable Fire-Extinguishing Media:
- Foam (alcohol-resistant foam), powder, and carbon dioxide are effective fire-extinguishing agents.

5.2 Unsuitable Extinguishing Media:
- None under normal conditions.

5.3 Hazardous Combustion Products:
- Carbon oxides, nitrogen oxides, sulphur oxides.

5.4 Special Protective Actions for Fire Fighters:
- Cool the container(s) surface that is exposed to fire by spraying the surface with water.
- When fighting the fire, wear protective equipment (i.e., respiratory masks, self contained breathing apparatus, chemical protection suit, gloves, boots, goggles, mask, etc.) as needed to avoid inhaling and/or skin contact with the chemical substance. Extinguish from the upwind direction.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Measures:
- Wear protective equipment (i.e., respiratory masks, self contained breathing apparatus, chemical protection suit, gloves, boots, goggles, mask, etc.) as needed to avoid inhaling and/or skin contact with the chemical and/or vapours, if any. Work upwind, if possible.
- See Section 8 of this SDS for Personal Protective Equipment.

6.2 Environmental Precautions:
- Do not allow to enter drains, sewers or water courses.
- The chemical substance in question should not be released into the environment (water, soil).

6.3 Spill Containment and Cleaning Up:

Minor Spills
- Avoid chemical contact by using personal protective equipment.
- Clean up spills immediately.
- Contain and absorb spill with sand, earth or other suitable absorbent material.
- Place spilled material in clean, dry, sealable, labelled container for disposal.

Major Spills
- Clear area of personnel and move upwind.
- Call SCDF or local Fire Brigade.
- Wear full body protective clothing with appropriate respiratory masks (including self contained breathing apparatus).
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or other suitable absorbent material.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise local Environmental Agency or Authority.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

7.2 Conditions for Safe Storage:

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Keep out of reach of children.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters/Occupational Exposure Limits:

Ingredient	CAS No.	PEL/OEL	Source
Potassium carbonate	584-08-7	2 mg/m3	ACGIH TLV-STEL
Aryl sulphonate	657-84-1	Not established	Not established
Polyethylene Glycol	25322-68-3	10 mg/m3	ACGIH TWA
Diethylene glycol	111-46-6	10 mg/m3	ACGIH TWA
EDTA, tetrapotassium salt	5964-35-2	Not established	Not established
Hydroxylamine derivative	133986-51-3	Not established	Not established
Para-phenylenediamine derivative	92-09-1	Not established	Not established
Potassium sulfate	7778-80-5	2 mg/m3	ACGIH
Triethanolamine	102-71-6	5 mg/m3	ACGIH TLV-TWA
Sodium hydroxide	1310-73-2	2 mg/m3	ACGIH TLV
Sodium hydroxide	1310-73-2	2 mg/m3	OHSA PEL
Sodium hydroxide	1310-73-2	10mg/m3	NIOSH IDLH
Potassium hydroxide	1310-58-3	2 mg/m3	ACGIH TLV, OSHA

8.2 Appropriate Engineering Controls:

- Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

8.3 Personal Protective Equipment:

- Use the following protective equipment as needed:
- **Respiratory Protection:** Self contained breathing apparatus.
- **Eye Protection:** Wear approved safety goggles.
- **Hand Protection:** Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
- **Skin Protection:** Apron and long sleeves are recommended. Wear suitable protective clothing.
- **Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance Physical State: Clear liquid
9.2 Colour: Yellow to amber
9.3 Odour: No odour
9.4 Odour Threshold: Not applicable

9.5

Property	Value	Notes
Melting Point	0°C	
Boiling Point	> 100°C	
Flash Point	Not applicable (Not flammable)	Closed cup
Explosive Limit	Not applicable	Lower limit
Explosive Limit	Not applicable	Upper limit
Vapour Pressure	Not applicable	mmHg at 20°C
Vapour Density	Not applicable	Air=1
Relative Density	1.179	25°C
Solubility in Water	Completely soluble	Water at 20°C
Solubility (Other)	Not available	
Partition Coefficient: n-octanol/water	Not available	
Viscosity	Not applicable (like water)	
pH	13.25	25°C
Evaporation Rate	Not applicable	Butyl Acetate = 1
Flammability (Solid, Gas)	Not applicable	
Auto-Ignition Temperature	Not applicable (Not flammable)	
Decomposition Temperature	Unknown	

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity/Incompatible Materials:
- Strong oxidizers, strong acids.

10.2 Chemical Stability:
- Stable under normal temperature and pressure.

10.3 Possibility of Hazardous Reaction:
- Hazardous polymerisation will not occur.

10.4 Conditions to Avoid:
- Freezing. Protect against direct sunlight.

10.5 Hazardous Decomposition Products:
- Carbon oxides, nitrogen oxides, sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity on Product Mixture:
- Oral LD50 Rat > 2000 mg/kg
- Dermal LD50 No data available.
- Inhalation LC50 No data available.

11.2 Acute Toxicity on Ingredients:

Chemical Name	CAS No.	Acute Oral (LD50 mg/kg)	Test Animal
Potassium carbonate	584-08-7	1870	Rat
Aryl sulphonate	657-84-1	> 3000	Rat
Polyethylene Glycol 300	25322-68-3	27.5	Rat
Diethylene glycol	111-46-6	12565	Rat
EDTA, tetrapotassium salt	5964-35-2	2700	Rat

Hydroxylamine derivative	133986-51-3	> 2000	Rat
Para-phenylenediamine derivative	92-09-1	400	Rat
Potassium sulfate	7778-80-5	6600	Rat
Triethanolamine	102-71-6	4200 - 11300	Rat
Sodium hydroxide	1310-73-2	LD100: 500	Rabbit
Potassium hydroxide	1310-58-3	365	Rat

11.3 Skin Corrosion/Irritation:
- Skin irritation.

11.4 Serious Eye Damage/Irritation:
- Strongly irritant.

11.5 Respiratory Organ or Skin Sensitisation:
- None.

11.6 Germ Cell Mutagenicity:
- None.

11.7 Carcinogenicity:
- Substance in group [I: 2A: 2B] by IARC (International Agency for Research on Cancer): None.

11.8 Reproductive Toxicity:
- None.

11.9 Specific Target Organ Toxicity:
- None.

11.10 Aspiration Hazard
- Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity of Product Mixture:
- No data available.

12.2 Ecotoxicity on Ingredients:

Chemical Name	CAS No.	Toxicity	Marine Organism
Potassium carbonate	584-08-7	LC50 (96h): 68 mg/l	Fish: Rainbow trout
Potassium carbonate	584-08-7	LC50 (96h): 230 mg/l	Fish: Bluegill sunfish
Potassium carbonate	584-08-7	EC50 (48h): 430 mg/l	Water flea: Daphnia magna
Aryl sulphonate	657-84-1	EC50 (48h): 54 mg/l	Water flea: Daphnia magna
Polyethylene Glycol 300	25322-68-3	Not established	Not established
Diethylene glycol	111-46-6	LC50: 9630/8450 mg/l	Fish: Golden Orfe
EDTA, tetrapotassium salt	5964-35-2	Not established	Not established
Hydroxylamine derivative	133986-51-3	Not established	Not established
Para-phenylenediamine derivative	92-09-1	Not established	Not established
Potassium sulfate	7778-80-5	LC50 (96h): 653-796 mg/l	Fish: Lepomis machrochirus
Potassium sulfate	7778-80-5	EC50 (48h): 890 mg/l	Water flea: Daphnia magna
Triethanolamine	102-71-6	LC50 (24h): > 5000 mg/l	Fish: Carassius auratis
Sodium hydroxide	1310-73-2	LC50(48h): 189 mg/l	Leuciscus idus melanotus
Potassium hydroxide	1310-58-3	LC50 (96h): 80 mg/l	Fish: Gambusia affinis

12.3 Persistence and Degradability:
- No data on possible environmental effects have been found.

12.4 Bioaccumulative Potential:
- No data available on bioaccumulation.

12.5 Mobility:

- The product is water soluble and may spread in water systems.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal Method in Singapore:

- Dispose off in accordance to the Environmental Public Health (Toxic Industrial Waste) Regulations under the Environmental Protection and Management Act (EPMA).

13.2 Disposal Method Overseas:

- Dispose off in accordance with all applicable local or national regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 Land (ADR):

- UN Number: UN1719
- Class: 8, Corrosive
- Subsidiary Risk: None
- Packing Group: III
- Proper Shipping Name: Caustic Alkali Liquid N.O.S. (sodium hydroxide, potassium hydroxide)

14.2 Sea (IMDG):

- UN Number: UN1719
- Class: 8, Corrosive
- Subsidiary Risk: None
- Packing Group: III
- Proper Shipping Name: Caustic Alkali Liquid N.O.S. (sodium hydroxide, potassium hydroxide)
- Marine Pollutant (Yes/No): No
- Packing Instruction: P001
- EmS (Emergency schedule): F-A, S-B
- Limited quantity: 5L
- Further Information: Do not allow any contact with light metals - danger of corrosion.

14.3 Sea (Annex II of MARPOL 73/78 and the IBC Code):

- Pollution Category: Not applicable.
- Ship Type: Not applicable.
- Product Name: Not applicable.

14.4 Air (IATA):

- UN Number: UN1719
- Class: 8, Corrosive
- Subsidiary Risk: None
- Packing Group: III
- Proper Shipping Name: Caustic Alkali Liquid N.O.S. (sodium hydroxide, potassium hydroxide)
- Further Information: Do not allow any contact with light metals - danger of corrosion.

14.5 Special Precautions:

- Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 Applicable Singapore Regulations:

- Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations:
  This product is subject to the SDS, labelling, PEL and other requirements in the act/regulation.

- Environmental Protection and Management Act & Environmental Protection and Management (Hazardous Substances) Regulations:
  This product is subject to the requirements in the act/regulation.

- Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations: This product is subject to the requirements in this regulation.

SECTION 16: OTHER INFORMATION

16.1 Issued By:

- FUJIFILM Asia Pacific Pte. Ltd.
- This SDS is prepared in accordance with Singapore Standard SS 586 : Part 3 : 2022.

16.2 Disclaimer:

- The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions.