

SAFETY DATA SHEET**B&W Universal Film & Paper Developer**

1) IDENTIFICATION

Champion Product Code: 180129

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2) COMPOSITION/INFORMATION ON INGREDIENTS**Product Description:**

A single part Film & Paper developer concentrate containing the following components contributing to hazard:

	CAS NO	%w/w
Hydroquinone	123-31-9	3-5
Potassium Hydroxide	1310-58-3	0.5-2

3) HAZARDS IDENTIFICATION***Human Health Hazards:**

Harmful. Possible risk of irreversible effects. May cause sensitisation by skin contact. Limited evidence of a carcinogenic effect. Irritating to eyes and skin.

Safety Hazards

Contact with acids liberates toxic fumes, (sulphur dioxide).
Contact with X-Ray fixer liberates irritant fumes from the fixer (ammonia).

Environmental Hazards:

Will cause short term oxygen depletion and increase in alkalinity if allowed to enter aquatic environment with consequent damage to plant and animal organisms.

4) FIRST AID MEASURES

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Eyes:

Flush immediately with eye-wash solution or clean water for several minutes holding the eyelids apart. Obtain medical attention.

Inhalation:

Inhalation of the product is unlikely to occur. No vapour hazard exists under normal conditions of use.

Skin Contact:

Remove any contaminated clothing. Wash skin with cold water then thoroughly with a neutral, (non-alkaline) cleanser and water. Thoroughly wash contaminated clothing before re-use. Obtain medical attention if irritation develops.

Ingestion:

Rinse mouth with water and drink about two glasses of water. Do not induce vomiting. Obtain medical attention.

IN ALL CASES OF DOUBT OR IF SYMPTOMS PERSIST, SEEK MEDICAL ADVICE. SHOW THE PRODUCT LABEL AND THIS SAFETY DATA SHEET TO THE DOCTOR

5) FIRE-FIGHTING MEASURES

Not classified as flammable (water based). If involved in a major fire, toxic gases (CO, SO₂) could be produced.

Extinguishing Media:

Suitable for the surrounding fire.

Protective Equipment:

Self-contained respiratory equipment.

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6) ACCIDENTAL RELEASE MEASURES

Personal Protection:

When dealing with spillages of concentrate or working strength solution, use the personal protection specified in Section 8. Ensure spill area is well ventilated.

Environmental Precautions:

Prevent large spillages from entering drain by absorption into inert absorbent material (eg. dry sand or earth) and transfer to a container for disposal by a licensed waste contractor. Wash small spillages to drain with copious amounts of water.

Cleaning Up:

After collecting the bulk of the spillage thoroughly wash area to drain with water.

7) HANDLING AND STORAGE

Handling:

When handling product concentrates, avoid contact with eyes, skin and clothing. Use in a well ventilated area. Avoid contact with the working strength solution. After handling, the routine use of a neutral, (non-alkaline), hand cleanser will minimise the risk of adverse skin reaction.

Storage:

Store in a dry, well ventilated area at a moderate temperature. Store away from incompatible substances, (see Section 10).

8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Relevant Exposure Limits:

The table summarises data for the hazardous components identified in Section 2.

	Oral-rat LD₅₀	Workplace Exposure Limit
<i>Hydroquinone</i>	320mg/kg	0.5mg/m ³ (long-term)
<i>Potassium hydroxide</i>	365mg/kg	2mg/m ³ (short-term)

mg – milligram

kg – kilogram

m³ – cubic metre

ppmv – parts per million by volume

LD₅₀ – calculated dose to kill 50% of a population of rats when taken in food or drink

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The HSE has recently introduced the 'Workplace Exposure Limit' (WEL) to replace the OEL and MEL. If there is no WEL specified then the concentration should be as low as is reasonably practicable. The hydroquinone in the concentrate and the working strength solution may cause skin irritation and sensitisation by contact; it is also a Category 3 carcinogen and mutagen. Ingestion will irritate the mucous membranes; 1 gram of hydroquinone may induce tinnitus, nausea or headaches, and 5-12g can be fatal. However there should be no significant inhalation risk. Potassium hydroxide in these solutions may cause eye and skin irritation.

Engineering Measures:

Ensure good ventilation or local exhaust ventilation of the working area.

Hand Protection:

Wear impervious gloves when handling concentrates and to prevent contact with the working strength solution.

Eye Protection:

Wear safety glasses with side shields as the minimum level of protection. Provide eye-wash bottles in the immediate working area.

9) PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow liquid

Odour: Slight

pH at 20°C: 11.0

**Weight per ml
at 20°C:** 1.255g

Freezing Point: 3°C

Flammability: Not flammable

**Solubility
in water:** Completely soluble

10) STABILITY AND REACTIVITY**Stability:**

Stable under recommended storage conditions.

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Materials to avoid:

Avoid contact with strong acids and oxidising agents. Avoid contact with X-Ray fixer, (ammonia will be liberated from the fixer).

Hazardous Decomposition Products:

None under normal conditions of use.

11) TOXICOLOGICAL INFORMATION**Eye Contact:**

Likely to cause irritation and possible corneal damage due to presence of alkali and hydroquinone. Serious or long term damage unlikely if irrigation has been prompt.

Skin Contact:

Prolonged or repeated contact may cause irritation and possible sensitisation.

Ingestion:

Ingestion of the liquid concentrate is likely to cause irritation of the mouth and gastrointestinal tract. Not expected to be of high systemic toxicity.

Inhalation (of the liquid):

Likely to cause irritation and inflammation to mucous membrane. No vapour hazard under normal conditions of use.

12) ECOLOGICAL INFORMATION

The following summary of expected environmental effects is based on known data for the principal ingredients and on the chemical properties of the preparation.

A moderate bio-chemical oxygen demand and high pH will result in short term oxygen depletion and increased alkalinity in the aquatic environment, with subsequent localised damage to plant and animal organisms. Harmful short term effects are rapidly reduced by dilution, oxidation and photodecomposition and the product has a very low potential to persist in a harmful form.

As a result of the above properties, precautions should be taken to avoid release of the product or working strength solution into the environment, (see Section 13).

13) DISPOSAL CONSIDERATIONS**Surplus Product and Working Strength Solution:**

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Disposal should be in accordance with current local and national legislation and only by a licensed waste contractor. Do not dispose of either concentrate or working strength solutions into drains, sewers or waterways or on to soil.

Plastic Containers:

Rinse thoroughly with water and dispose as solid waste to land fill or re-cycle where possible.

Cardboard Cartons:

Re-cycle where possible or treat as solid waste.

14) TRANSPORT INFORMATION

Not Classified as Dangerous for Transport under current ADR Regulations

15) REGULATORY INFORMATION*

Contains Potassium Hydroxide and Hydroquinone.

Hazard Symbol:	Xn	Harmful
Risk Phrases:	R40 R43 R68	Limited evidence of a carcinogenic effect. May cause sensitisation by skin contact. Possible risk of irreversible effects.
Safety Phrases:	S36/37/39 S26	Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

16) OTHER INFORMATION

The information contained in this Safety Data Sheet does not constitute the users own assessment of work place risk as required by other health and safety legislation, (eg. COSHH Regulations in the UK).

Document History

Prepared by: IF
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Reference Sources Include: CHIP Regs and Related ACOPs
UK HSE EH40, Occupational Exposure Limits
Croner's First Aid Guide
Raw Materials MSDS

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IMDG Code 2004 Edition
ADR Regulations January 2005
Champion product data

* Changes this revision

The information contained in this Safety Data Sheet is to our best present knowledge correct and complete and is given in good faith but without warranty.