

Material Safety Data Sheet

According to 91/155 EEC

Printing date 15.05.2006

Reviewed on 15.05.2006

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

· **Product details**

· **Trade name:** Studional liq.

· **Article number:** BVL5L

· **Application of the substance / the preparation**

Photographic black and white developer concentrate

· **Manufacturer/Supplier:**

a&o imaging services uk ltd.
27 Great West Road
Brentford
Middlesex
TW8 9AX
UK

· **Further information obtainable from:**

Productmanagement, Tel.: + 49 7042 913-41, Fax: + 49 7042 913-18

· **Information in case of emergency:**

EUROPE :

Phone : + 49 214 30 99300 (Security service Bayer Industries Services Leverkusen)

2 Composition/information on ingredients

· **Chemical characterization**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 102-71-6 EINECS: 203-049-8	2,2',2''-nitrilotriethanol	36.3%
CAS: 123-31-9 EINECS: 204-617-8	1,4-dihydroxybenzene Carc. Cat. 3, Muta. Cat. 3; Xn, N; R 22-40-41-43-68-50	3.8%
CAS: 60-00-4 EINECS: 200-449-4	edetic acid Xi; R 36-52/53	1.5%
CAS: 92-43-3 EINECS: 202-155-1	1-phenyl-3-pyrazolidone Xn, N; R 22-51/53	0.5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 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.

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· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

4 First aid measures

· 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.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water.

· 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.

· Protective equipment: No special measures required.

6 Accidental release measures

· Person-related safety precautions: Not required.

· 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.

7 Handling and storage

· Handling:

· Information for safe handling: No special measures required.

· 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: Not required.

· Further information about storage conditions: None.

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 1,4-dihydroxybenzene

WEL Long-term value: 0.5 mg/m³

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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

Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· **Protection of hands:**



Protective 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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling

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°C

· **Flash point:** Not applicable.

· **Ignition temperature:** 305°C

· **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:** 1.196 g/cm³

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· Solubility in / Miscibility with water:	Fully miscible.
· pH-value at 20°C:	10.1
· Viscosity:	
Kinematic at 20°C:	12 s (DIN 53211/4)
· Solvent content:	
Organic solvents:	36.3 %
Water:	36.8 %
· Solids content:	26.9 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

 · **Acute toxicity:**

 · **LD/LC50 values relevant for classification:**
123-31-9 1,4-dihydroxybenzene

Oral	LD50	320 mg/kg (rat)
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 · **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

12 Ecological information

 · **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely 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.
- **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:** -

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:**
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:**
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- **National regulations:**

Class	Share in %
Wasser	36.8
I	3.8
NK	36.3

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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.
- 36 Irritating to eyes.
- 40 Limited evidence of a carcinogenic effect.
- 41 Risk of serious damage to eyes.
- 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.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 68 Possible risk of irreversible effects.

· **Department issuing MSDS:** Productmanagement department

· **Contact:** Mr. Vollhofer, a&o imaging solutions, Tel.: + 49 7042 913-43