

## Material Safety Data Sheet

According to 91/155/EC amended by 2001/58/EC

Printing date 26.07.2005

Reviewed on 09.08.2004



### 1 Identification of Product:

- **Use:** Ink jet printing ink
- **Range:** SOLVENT BASED DIGITAL BP RANGE - BP00A
- **Product Code(s):** BP004 BP135 BP215 BPA15 BPA35
- **Manufacturer/Supplier:**  
Sericol Limited  
Pysons Road, Broadstairs, Kent. CT10 2LE.  
Tel. +44 (0)1843 866668
- **Information department:** Product Safety Department. +44 (0)1843 872030
- **Emergency information:** Elaine Campling BSc.(Hons) +44(0)1843 872030

### 2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 112-07-2 EINECS: 203-933-3	2-butoxyethyl acetate	 Xn; R 20/21	50-100%
CAS: 108-94-1 EINECS: 203-631-1	Cyclohexanone	 Xn; R 10-20	5-10%

- **Additional information**

For the wording of the listed risk phrases refer to section 16.

### 3 Hazards identification

- **Hazard description:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**  
R 20/21 Harmful by inhalation and in contact with skin.
- **Classification system**  
The classification was made according to the latest editions of the EU-lists, and expanded by company and literature data.
- **Additional information:**  
Exposure to component solvent vapours above the occupational exposure limit, stated in Section 8, may result in adverse health effects such as mucous membrane and respiratory system irritation, adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.  
Organic solvents should not be used for hand cleaning as this may lead to absorption through the skin, skin irritation or dermatitis.

### 4 First aid measures

- **General information**  
Never make an unconscious person vomit or drink fluids.  
Immediately remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**  
Immediately wash with soap and water and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact**  
Rinse open eye for several minutes under running water. Then consult a doctor.

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- **After swallowing**  
Give patient copious amounts of water to drink and provide fresh air. Call for a doctor immediately.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards caused by the material, its products of combustion or resulting gases:**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**  
Cool endangered containers with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Refer to the protective measures stated in Sections 7 and 8. Keep unprotected personnel away.  
Ensure adequate ventilation  
Keep away from ignition sources
- **Measures for environmental protection:**  
Prevent seepage into sewage system, workpits and cellars.  
Inform respective authorities if seepage into water course or sewage system occurs.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to section 13.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).  
Store in cool, dry place in tightly sealed containers.  
Keep away from heat and direct sunlight.  
Ensure good ventilation and extraction at the workplace.
- **Storage:** Store in accordance with current national regulations.
- **Requirements to be met by storerooms and containers:** Store between 5 - 30°C.
- **Information about storage in one common storage facility:**  
Do not store together with oxidizing and acidic materials.  
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.

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## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates or solvent vapour below the occupational exposure limit stated, then suitable respiratory protection must be worn as a temporary measure and is specified below.

- **Components with limit values that require monitoring at the workplace:**

### 112-07-2 2-butoxyethyl acetate

TLV (European Union)	Short-term value: 333 mg/m <sup>3</sup> , 50 ppm Long-term value: 133 mg/m <sup>3</sup> , 20 ppm Skin
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### 108-94-1 Cyclohexanone

OES (Great Britain)	Short-term value: 20 ppm Long-term value: 10 ppm New, IOELV, Sk
TLV (European Union)	Short-term value: 81.6 mg/m <sup>3</sup> , 20 ppm Long-term value: 40.8 mg/m <sup>3</sup> , 10 ppm Skin

- **Additional information:**

The instructions and information provided by the manufacturer of the personal protective equipment on use, storage, maintenance and replacement must always be followed.

- **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.  
Avoid contact with the eyes and skin.  
Store protective clothing separately.

- **Breathing equipment:** CEN: A1 filter.

- **Protection of hands:**

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The selection of single or multi-use gloves is dependent upon the level of exposure (nitrile/neoprene gloves will last longer than latex/rubber). The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Always ensure that gloves are free from defects and that they are stored and used correctly. Gloves should be replaced regularly and if there is any sign of damage to the glove material.  
Use of the following recommended:

Single use disposable nitrile gloves (short duration exposure of few minutes, or where only splashes likely). Not to be reused when removed.

Minimum 0.4mm thick neoprene or nitrile gloves (longer duration exposure or mechanical handling activities). To be replaced immediately when punctured or degraded.

Heavy duty unlined neoprene gloves (when using solvents). To be replaced immediately when punctured or degraded.

- **Penetration time of glove material**

The exact break through time has to be obtained from the manufacturer of the protective gloves and must be observed.

- **Eye protection:** Safety glasses

- **Body protection:**

Protective work clothing; disposable overalls are preferable.

Acrylates, like any other organic solvent, are skin and/or eye irritants. Since acrylates do not evaporate, they will remain on the skin or clothes for extended periods. This long term exposure, caused by the non volatility, can give rise to dermatitis. It is essential that the measures given above are always followed.

- **COSHH Essentials for Printers Control Guidance Sheet:**

P113 Narrow-format ink-jet printing  
P212 Wide-format ink-jet printing  
P214 Control of ozone at ultraviolet lamps

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S100 General advice  
S101 Selection of personal protective equipment  
Also see Section 16 'Other information'

### 9 Physical and chemical properties:

#### · General Information

<b>Form:</b>	Liquid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic

#### · Change in condition

**Melting point/Melting range:** undetermined  
**Boiling point/Boiling range:** 153°C

- |                                   |   |
|-----------------------------------|---|
| <b>· Flash point:</b>             | 63°C  |
| <b>· Self igniting:</b>           | Product is not selfigniting.                  |
| <b>· Danger of explosion:</b>     | Product does not present an explosion hazard. |
| <b>· Vapour pressure at 20°C:</b> | 5.0 hPa                                       |
| <b>· Density at 20°C:</b>         | 0.950 g/cm <sup>3</sup>                       |
| <b>· Water:</b>                   | Not miscible or difficult to mix              |
| <b>· Solvent content:</b>         |   |
| <b>Organic solvents:</b>          | 95.7 %  |

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Stable until:** 50°C

### 11 Toxicological information

#### · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

##### 112-07-2 2-butoxyethyl acetate

Oral	LD50	2400 mg/kg (rat)
Dermal	LD50	1500 mg/kg (Rabbit)

##### 108-94-1 Cyclohexanone

Oral	LD50	1900 mg/kg (rat)
Dermal	LD50	948 mg/kg (Rabbit)
Inhalation	LC50	8000 mg/m <sup>3</sup> (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.

### 12 Ecological information:

#### · General notes:

There are no data on the preparation itself.  
The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.  
Do not allow product to reach ground water, water course or sewage system.

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**13 Disposal considerations**

- **Product:**
- **Recommendation**  
Must not be disposed together with household rubbish. Do not allow product to reach sewage system.

• <b>European waste catalogue</b>
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08 03 12	waste ink containing dangerous substances
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- **Waste Hazard Classification:** H5 - Harmful
- **Recommendation:**  
Dispose of product according to official regulations.  
Also see Section 16 'Other Information'

**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:** -

- **Transport/Additional information:**  
Not dangerous according to the above specifications.

**15 Regulations**

- **Markings according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives on Hazardous Materials
- **Code letter and hazard designation of product:**  
Xn Harmful
- **Hazard-determining components of labelling:**  
2-butoxyethyl acetate
- **Risk phrases:**  
20/21 Harmful by inhalation and in contact with skin.
- **Safety phrases:**  
36/37 Wear suitable protective clothing and gloves.

**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.

For UK Only; disposal can be arranged by Environmental Services,  
Telephone Number: (01843) 872080  
Fax Number: (01843) 872068

COSHH Essentials for Printers: HSE Books 2000 ISBN 0 7176 1835 8

- **Relevant R-phrases**  
10 Flammable.  
20 Harmful by inhalation.  
20/21 Harmful by inhalation and in contact with skin.
- **Recommended restriction of use**  
The product should not be used for any purpose other than that specified in Section 1.
- **Department issuing MSDS:** Technical Administration - Sericol UK Limited
- **Contact:** Elaine Campling BSc.(Hons) - Product Safety Advisor