

Safety Data Sheet according to 1907/2006/EC, Article 31

Printing date 26.06.2007

Revision: 26.06.2007

1 Identification of Product:

- **Use:** Screen Printing Ink
- **Range:** ActivaSOL Ink
- **Manufacturer/Supplier:**
Uniform
Chertsey Business Centre, Riversdell Close, Chertsey, Surrey. KT16 9as
Tel. +44 (0) 1932 568555
info.uniformdigital.com
- **Information department:** Product Safety Department. +44 (0) 1932 568555

2 Hazards identification

- **Hazard description:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**
R 10 Flammable.
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.

3 Composition/information on ingredients

- **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: 34590-94-8 EINECS: 252-104-2	(2-methoxymethylethoxy)propanol	10-25%
CAS: 108-94-1 EINECS: 203-631-1	Cyclohexanone Xn; R 10-20	5-10%
CAS: 108-10-1 EINECS: 203-550-1	4-methylpentan-2-one Xn, Xi, F; R 11-20-36/37-66	1-5%
CAS: 96-48-0 EINECS: 202-509-5	2(3H)-Furanone, dihydro- Xn, Xi; R 22-41	1-5%

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

4 First aid measures

- **General information**
Never make an unconscious person vomit or drink fluids.
Immediately remove any clothing soiled by the product.

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- **After inhalation**
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with soap and water and rinse thoroughly.
- **After eye contact**
Rinse open eye for several minutes under running water. Then consult a doctor.
- **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**
CO₂, 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:**
Carbon monoxide (CO)
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:**
Ensure adequate ventilation
Keep away from ignition sources
Refer to the protective measures stated in Sections 7 and 8. Keep unprotected personnel away.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
Do not allow product to reach sewage system or any water course.
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:**
Store in cool, dry place in tightly sealed containers.
Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
- **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 alkalis (caustic solutions).
Do not store together with oxidizing and acidic materials.

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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	
WEL (Great Britain)	Short-term value: 50 ppm Long-term value: 20 ppm Sk
IOELV (European Union)	Short-term value: 333 mg/m ³ , 50 ppm Long-term value: 133 mg/m ³ , 20 ppm Skin
34590-94-8 (2-methoxymethylethoxy)propanol	
WEL (Great Britain)	Long-term value: 308 mg/m ³ , 50 ppm Sk
IOELV (European Union)	Long-term value: 308 mg/m ³ , 50 ppm Skin
108-94-1 Cyclohexanone	
WEL (Great Britain)	Short-term value: 20 ppm Long-term value: 10 ppm Sk
IOELV (European Union)	Short-term value: 81.6 mg/m ³ , 20 ppm Long-term value: 40.8 mg/m ³ , 10 ppm Skin
108-10-1 4-methylpentan-2-one	
WEL (Great Britain)	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm Sk
IOELV (European Union)	Short-term value: 208 mg/m ³ , 50 ppm Long-term value: 83 mg/m ³ , 20 ppm

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

· **Breathing equipment:**

In cases of insufficient ventilation use the following respiratory protective device:
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.

Type	Latex/Rubber			Nitrile		Neoprene
	Single Use	Multi Use	Heavy Duty (Gauntlets)	Single Use	Multi Use	Heavy Duty (Gauntlets)
Preparation	X	Y	X	X	Y	X
Print Shop						
Solvent Inks	Y	Y	Y	Y	Y	Y
UV Inks	X	X	X	Y	Y	Y
Reclaim	X	X	Y	X	X	Y

Y = recommended X = not recommended

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Gloves should be replaced regularly and if there is any sign of damage to the glove material.

- **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.
- **COSHH Essentials for Printers Control Guidance Sheet:**
Guidance is provided by the Health and Safety executive (HSE) concerning COSHH (Control of Substances Hazardous to Health) for printers.
See COSHH Essentials for Printers on the HSE website:
www.hse.gov.uk and enter 'COSHH Essentials for printers' in the search bar.

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:	114°C

· Flash point:	45°C
· Self igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Vapour pressure at 20°C:	0.3 hPa
· Density:	Not determined
· Water:	Not miscible or difficult to mix
· Solvent content:	
Organic solvents:	100.0 %

10 Stability and reactivity

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

11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

112-07-2 2-butoxyethyl acetate

Oral	LD50	7250 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 ³ (rat)
	EC0	370 mg/kg (Scenedesmus subspicatus)
	LC50/96h	527 mg/l (Pimephales promelas (fathead minnow))

108-10-1 4-methylpentan-2-one

Oral	LD50	2100 mg/kg (rat)
Dermal	LD50	16000 mg/kg (rab)
Inhalation	LC50	8.3-16.6 mg/m ³ (rat)

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- **Additional toxicological information:**
2-Butoxyethanol and its acetate are readily absorbed through the skin and may cause harmful effects on the blood

12 Ecological information:

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

112-07-2 2-butoxyethyl acetate

EC50/48 h	150 mg/l (Daphnia)
IC50	2800 mg/l (Bacteria)
LC50/96 h	80 mg/l (Fathead Minnows)
THOD	2.10 mg/l (-)

108-94-1 Cyclohexanone

EC50 24h	820 mg/g (Daphnia)
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- **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.

13 Disposal considerations

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

- **European waste catalogue**

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:** 3
- **UN Number:** 1210
- **Label** 3
- **Packaging group:** III
- **EMS Number:** F-E, S-D
- **Marine pollutant:** No
- **Proper shipping name:** PRINTING INK

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1210
- **Label** 3

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- **Packaging group:** III
- **Proper shipping name:** PRINTING INK

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:**
10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
- **Safety phrases:**
36/37 Wear suitable protective clothing and gloves.
43 In case of fire, use metallic extinguishing powder. Never use water.

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.

An "*" in the left hand margin indicates an amendment from the previous version.

- **Relevant R-phrases**
10 Flammable.
11 Highly flammable.
20 Harmful by inhalation.
20/21 Harmful by inhalation and in contact with skin.
22 Harmful if swallowed.
36/37 Irritating to eyes and respiratory system.
41 Risk of serious damage to eyes.
66 Repeated exposure may cause skin dryness or cracking.
- **Recommended restriction of use**
The product should not be used for any purpose other than that specified in Section 1.