

# Safety Data Sheet

According to 1907/2006/EC, Article 31



Activator ready for use for Water Transfer Printing

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

- **Product details/Trade name:** **Activator ready for use for Water Transfer Printing**
- **Application of the substance / the preparation** **Industrial solvent for Water transfer printing**
- **Manufacturer/Supplier:** WT - Direct GmbH  
3-D Wassertransferdrucksysteme & Zubehör  
Boschstraße 16  
D-73655 Plüderhausen
- **Further information obtainable from:**
- Information in case of emergency:**  
Telephone: +49-7181-9854840  
Telefax number: +49-7181-98559822  
E-Mail: info@wt-direct.de

## 2. Hazards identification

GHS Classification

- H332: Harmful if inhaled. Acute toxicity, Category 4, Inhalation  
H312: Harmful in contact with skin. Acute toxicity, Category 4, Dermal  
H302: Harmful if swallowed. Acute toxicity, Category 4, Oral  
H315: Causes skin irritation. Skin irritation, Category 2  
H319: Causes serious eye irritation. Eye irritation, Category 2

### EC Classification

Xn; R20/21/22

Xi; R36/38

For the full text of the R-phrases mentioned in this Section, see Section 16.

## 3. Composition/information of ingredients

Hazardous ingredients:

<b>Chemical characterization:*</b>	<b>CAS-Nr.</b>	<b>%</b>	<b>EG-number</b>	<b>Classification</b>
2-Butoxyethanole	111-76-2	25 - 70	203-905-0	Xi, R36 R 66 - 67
2-Butoxyethanole	111-76-2	25 - 70	203-905-0	GHS-classification: H332: Harmful if inhaled H312: Harmful in contact with skin. H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation.

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## 4. First Aid Measures

After inhalation: fresh air. If breathing stops: mouth-to-mouth respiration or mechanical ventilation. Oxygen mask if necessary! Immediately call in physician.  
After skin contact: wash off with plenty of water. Remove contaminated clothing. Consult a physician.  
After eye contact: rinse out with plenty of water. Call in ophthalmologist.  
After swallowing: immediately make victim drink water (two glasses at the most). Get medical attention.

## 5. Fire-fighting measures

Suitable extinguishing media  
Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

Specific hazards during fire fighting  
Combustible material, Vapours are heavier than air and may spread along floors.  
Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.  
Special protective equipment for fire-fighters  
Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Further information  
Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## 6. Accidental release measures

Personal precautions  
Avoid substance contact. Do not breathe vapours, aerosols. Ensure supply of fresh air in enclosed rooms. Ensure adequate ventilation.

Environmental precautions  
Do not empty into drains.

Methods for cleaning up  
Take up with liquid-absorbent material (e.g. Chemizorb®).  
Forward for disposal. Clean up affected area.

## 7. Handling and storage

### Handling

Advice on safe handling  
No further requirements.

### Storage

Further information on storage conditions

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Tightly closed. Dry. Protected from light.

Requirements for storage areas and containers

Do not use light-weight-metal containers.

## 8. Exposure controls/personal protection

### Components with workplace control parameters

Components	Basis	Value	Control parameters	Ceiling Limit Value, Remarks
2-butoxyethanol (111-76-2)	ECTLV	STEL	50 ppm 246 mg/m <sup>3</sup>	Can be absorbed through the skin.
		SKIN_DES		
	TWA	20 ppm 98 mg/m <sup>3</sup>		
EH40 WEL	SKIN_DES	STEL	50 ppm	Can be absorbed through the skin.
		TWA	25 ppm	

### Personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

#### Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

#### Hand protection

full contact:

Glove material:	butyl-rubber
Glove thickness:	0,7 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,40 mm
Break through time:	> 120 min

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example. KCL 898 Butoject® (full contact), KCL 730 Camatril® -Velours (splash contact).

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This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Eye protection  
required

Protective measures  
Protective suit

Hygiene measures  
Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

## 9. Physical and chemical properties

Form	liquid
Colour	colourless
Odour	ether-like
pH	7 at 20 °C (as aqueous solution)
Viscosity, dynamic	5,31 mPa.s at 20 °C
Melting point	< -70 °C
Boiling point/boiling range	168 - 170 °C
Ignition temperature	230 °C Methode: (DIN 51794)
Flash point	63 - 64 °C
Oxidizing properties	no data available
Flammability	no data available
Lower explosion limit	1,1 %(V)
Upper explosion limit	10,6 %(V)
Vapour pressure	0,8 hPa at 20 °C 7,6 hPa at 50 °C
Relative vapour density	4,07
Density	0,90 g/cm <sup>3</sup> at 20 °C
Solubility/qualitative	no data available
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	log Pow: 0,81 at 25 °C (experimental), (Lit.) No bioaccumulation is to be expected (log Pow <1).
Evaporation rate	no data available

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## 10. Stability and reactivity

Conditions to be avoided  
no information available

Substances to be avoided  
oxidizing agent, strong alkalis.

Hazardous decomposition products  
no information available

Further information  
light-sensitive..

## 11. Toxicological information

Acute toxicity  
LC<sub>50</sub> (inhalation, rat): 72.5 mg/l /4 h.  
LD<sub>50</sub> (dermal, rabbit): 5640 mg/kg.  
LD<sub>50</sub> (oral, rat): 6500 mg/kg.

Specific symptoms in animal studies:  
Eye irritation test (rabbit): Slight irritations.  
Skin irritation test (rabbit): Slight irritations.

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative.

### *Further toxicological information*

After skin contact: Slight irritations.

After eye contact: Slight irritations.

### *Further data*

The product should be handled with the care usual when dealing with chemicals  
Result: Eye irritation

## 12. Ecological information

Biodegradation: 100 % /28 d.  
Readily biodegradable.

Behaviour in environmental compartments:  
Distribution: log p(o/w): 1.77 (calculated).  
No appreciable bioaccumulation potential is to be expected (log P(o/w) 1-3).

Ecotoxic effects:  
Biological effects:  
Fish toxicity: Br.rerio LC<sub>50</sub>: 50-70 mg/l /96 h.  
Daphnia toxicity: Daphnia magna EC<sub>50</sub>: 665 mg/l /48 h.

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Bacterial toxicity: bacteria EC50: >5000 mg/l /16 h.

Further ecologic data:

BOD<sub>5</sub>: 383 mg/g.

COD: 1.87 g/g.

No ecological problems are to be expected when the product is handled and used with due care and attention.

## 13. Disposal considerations

### Product

Chemicals must be disposed of in compliance with the respective national regulations.

### Packaging

The product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system..

## 14. Transport Information

Not classified as dangerous in the meaning of transport regulations

## 15. Regulatory information

### GHS-Labeling:

Hazard pictograms:



signal word:

Warning

Hazard statements

H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled.

H319: Causes serious eye irritation.

H315: Causes skin irritation.

Precautionary statements

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Labelling according to EC Directives

Symbol(s):	Xn	Harmful
R-phrase(s):	20/21/22-36/38	Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin.
S-phrase(s):	36/37-46	Wear suitable protective clothing and gloves. If swallowed, seek medical advice immediately and show this container or label.
EC-No.	203-905-0	EC Label
Reduced labelling (≤125 ml)		
Symbol(s):	Xn	Harmful
R-phrase(s):	20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
S-phrase(s):	36/37	Wear suitable protective clothing and gloves.

## National legislation

Storage class VCl: 10 Combustible liquids not in Storage Class 3  
Major Accident Hazard: 96/82/EC Update: 2003  
Legislation Directive 96/82/EC does not apply

Other regulations: Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

## 16. Other information

Full text of R-phrases referred to under sections 2 and 3

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R36/38 Irritating to eyes and skin.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.