

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 1 / 9

## SECTION 1: Identification of the substance / preparation and of the company

### 1.1 Product identifier

**22-468**

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1 Relevant uses

Ink

#### 1.2.2 Uses advised against

None known.

### 1.3 Details of the supplier of the safety data sheet

#### Company

Pelikan Hardcopy Production AG  
Haldenstrasse 28  
8620 Wetzikon / SWITZERLAND  
Phone +41 (0) 44 9861-299

#### Address enquiries to

#### Technical information

#### Safety Data Sheet

sdb@chemiebuero.de

### 1.4 Emergency phone

#### Company

+41 (0) 44 9861-299 Mo-Fr 8:00-17:00

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

No classification.

#### 2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

No classification.

### 2.2 Label elements

#### Labelling according to Regulation 67/548/EEC or 1999/45/EC

The product does not require a hazard warning label in accordance with EC-directives.

#### Hazard symbols

none

#### R-phrases

none

#### Special labelling

Safety data sheet available for professional user on request.

### 2.3 Other hazards

#### Physico-chemical hazards

No particular hazards known.

#### Human health dangers

Frequent persistent contact with the skin can cause skin irritation.

#### Environmental hazards

Does not contain any PBT or vPvB substances.

#### Other hazards

Further hazards were not determined with the current level of knowledge.

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 2 / 9

**SECTION 3: Composition / Information on ingredients**

**Product-type:**

The product is a mixture.

Range [%]	Substance
1 -< 15	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1
	GHS/CLP: Acute Tox. 4: H302
	EEC: Xn, R 22
1 -<10	2,2'-oxybisethanol
	CAS: 111-46-6, EINECS/ELINCS: 203-872-2, EU-INDEX: 603-140-00-6
	GHS/CLP: Acute Tox. 4: H302
	EEC: Xn, R 22
1 -<5	2-(2-Butoxyethoxy)ethanol
	CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, ECB-Nr.: 01-2119475104-44-xxxx
	GHS/CLP: Eye Irrit. 2: H319
	EEC: Xi, R 36

**Comment on component parts**

Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.  
For full text of H-statements and R-phrases: see SECTION 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General information**

Take off contaminated clothing and wash before reuse.

**Inhalation**

Ensure supply of fresh air.  
In the event of symptoms seek for medical treatment.

**Skin contact**

When in contact with the skin, clean with soap and water.  
Consult a doctor if skin irritation persists.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

**Ingestion**

Seek medical advice immediately.  
Rinse out mouth and give plenty of water to drink.

**4.2 Most important symptoms and effects, both acute and delayed**

None known.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Fire-fighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

**Extinguishing media that must not be used**

Full water jet.

**5.2 Special hazards arising from the substance or mixture**

Unknown risk of formation of toxic pyrolysis products.  
Not combusted hydrocarbons.  
Nitrogen oxides (NOx).

**5.3 Advice for firefighters**

Use self-contained breathing apparatus.  
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 3 / 9

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

High risk of slipping due to leakage/spillage of product.  
Ensure adequate ventilation.

### **6.2 Environmental precautions**

Prevent spread over a wide area (e.g. by containment or oil barriers).  
Do not discharge into the drains/surface waters/groundwater.

### **6.3 Methods and material for containment and cleaning up**

Take up mechanically.  
Take up residues with absorbent material (e.g. sand, sawdust, general-purpose binder).  
Dispose of absorbed material in accordance with the regulations.

### **6.4 Reference to other sections**

See SECTION 8+13

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

No special measures necessary if used correctly.  
The product is not combustible.  
Wash hands before breaks and after work.  
Use barrier skin cream.  
Take off contaminated clothing and wash before reuse.

### **7.2 Conditions for safe storage, including any incompatibilities**

Keep only in original container.  
Prevent penetration into the ground.  
Do not store together with oxidizing agents.  
Do not store together with food and animal food/diet.  
Keep container in a well-ventilated place.  
Keep container tightly closed.  
Protect from heat/overheating.

### **7.3 Specific end use(s)**

See product use, SECTION 1.2

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 4 / 9

**SECTION 8: Exposure controls / personal protection**

**8.1 Control parameters**

**Ingredients with occupational exposure limits to be monitored (GB)**

Range [%]	Substance
1 - <5	2-(2-Butoxyethoxy)ethanol
	CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, ECB-Nr.: 01-2119475104-44-xxxx
	Long-term exposure: 10 ppm, 67,5 mg/m <sup>3</sup>
	Short-term exposure (15-minute): 15 ppm, 101,2 mg/m <sup>3</sup>
1 - <10	2,2' -oxybisethanol
	CAS: 111-46-6, EINECS/ELINCS: 203-872-2, EU-INDEX: 603-140-00-6
	Long-term exposure: 23 ppm, 101 mg/m <sup>3</sup>
1 - < 20	Glycerol
	CAS: 56-81-5, EINECS/ELINCS: 200-289-5
	Long-term exposure: 10 mg/m <sup>3</sup> , (mist)
1 - < 15	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1
	Long-term exposure: 20 ppm, 52 mg/m <sup>3</sup> , Vapour, particulate: 10 mg/m <sup>3</sup>
	Short-term exposure (15-minute): 40 ppm, 104 mg/m <sup>3</sup>

**Ingredients with occupational exposure limits to be monitored (EU)**

Range [%]	Substance / EC LIMIT VALUES
1 - <5	2-(2-Butoxyethoxy)ethanol
	CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, ECB-Nr.: 01-2119475104-44-xxxx
	Eight hours: 10 ppm, 67,5 mg/m <sup>3</sup>
	Short-term (15-minute): 15 ppm, 101,2 mg/m <sup>3</sup>
1 - < 15	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1
	Eight hours: 20 ppm, 52 mg/m <sup>3</sup> , H
	Short-term (15-minute): 40 ppm, 104 mg/m <sup>3</sup>

**DNEL**

Range [%]	Substance
1 - <5	2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
	worker, dermal, Long-term - systemic effects: 20 mg/kg.
	general population, inhalative, Acute - local effects: 50,6mg/m <sup>3</sup> .
	general population, inhalative, Long-term - systemic effects: 34 mg/m <sup>3</sup> .
	worker, inhalative, Long-term - systemic effects: 67,5 mg/m <sup>3</sup> .
	general population, dermal, Long-term - systemic effects: 10 mg/kg.

**PNEC**

Range [%]	Substance
1 - <5	2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
	fresh water, 1 mg/l.
	sediment (marine water), 0,4 mg/kg.
	marine water, 0,1 mg/l.
	sewage treatment plants (STP), 200 mg/l.
	sediment (fresh water), 4 mg/kg.

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 5 / 9

## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses.
<b>Hand protection</b>	butyl rubber, > 120 min (EN 374) The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	light protective clothing
<b>Other</b>	Avoid contact with eyes and skin.
<b>Respiratory protection</b>	Not required under normal conditions.
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	See SECTION 6+7.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	liquid
<b>Color</b>	red
<b>Odor</b>	characteristic
<b>Odour threshold</b>	not applicable
<b>pH-value</b>	8,6
<b>pH-value [1%]</b>	not determined
<b>Boiling point [°C]</b>	> 100
<b>Flash point [°C]</b>	not applicable
<b>Flammability [°C]</b>	not determined
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidizing properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	not determined
<b>Density [g/ml]</b>	1,07 (25°C / 77,0°F)
<b>Bulk density [kg/m³]</b>	not applicable
<b>Solubility in water</b>	miscible
<b>Partition coefficient [n-octanol/water]</b>	not determined
<b>Viscosity</b>	2,41 mm²/s (25°C)
<b>Relative vapour density determined in air</b>	not applicable
<b>Evaporation speed</b>	not applicable
<b>Melting point [°C]</b>	< 0
<b>Autoignition temperature [°C]</b>	not applicable
<b>Decomposition temperature [°C]</b>	not determined

### 9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

The product is stable under standard conditions.

### 10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 6 / 9

#### 10.4 Conditions to avoid

See SECTION 7.2.

#### 10.5 Incompatible materials

not applicable

#### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

Range [%]	Substance
1 -< 15	Ethylene glycol, CAS: 107-21-1
	LD50, oral, Rat: > 2000 mg/kg (IUCLID).
1 - <10	2,2'-oxybisethanol, CAS: 111-46-6
	LD50, dermal, Rabbit: 11890 mg/kg.
	LD50, oral, Rat: 12565 mg/kg.
1 - <5	2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
	LD50, oral, Rat: 5660 mg/kg.
	LD50, dermal, Rabbit: 4000 mg/kg.

Serious eye damage/irritation	not determined
Skin corrosion/irritation	not determined
Respiratory or skin sensitisation	not determined
Specific target organ toxicity — single exposure	not determined
Specific target organ toxicity — repeated exposure	not determined
Mutagenicity	not determined
Reproduction toxicity	not determined
Carcinogenicity	not determined
General remarks	

Toxicological data of complete product are not available.  
No classification on the basis of the calculation procedure of the preparation directive.  
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Range [%]	Substance
1 -< 15	Ethylene glycol, CAS: 107-21-1
	LC50, (96h), Oncorhynchus mykiss: > 18500 mg/l.
	EC50, (24h), Daphnia magna: 74000 mg/l.
1 - <5	2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
	LC50, (96h), Lepomis macrochirus: 1300 mg/l (IUCLID).
	EC50, (48h), Daphnia magna: > 100 mg/l (IUCLID).

#### 12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 7 / 9

**12.3 Bioaccumulative potential**

not determined

**12.4 Mobility in soil**

not determined

**12.5 Results of PBT and vPvB assessment**

Based on all available information not to be classified as PBT or vPvB respectively.

**12.6 Other adverse effects**

No classification on the basis of the calculation procedure of the preparation directive.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

**Product**

Coordinate disposal with the authorities if necessary.

**Waste no. (recommended)**

080313

**Contaminated packaging**

Packaging that cannot be cleaned should be disposed of as for product.  
Uncontaminated packaging may be taken for recycling.

**Waste no. (recommended)**

150102

**SECTION 14: Transport information**

**14.1 UN number**

See SECTION 14.2 in accordance with UN shipping name

**14.2 UN proper shipping name**

**Transport by land according to  
ADR/RID**

NO DANGEROUS GOODS

**Inland navigation (ADN)**

NO DANGEROUS GOODS

**Marine transport in accordance with  
IMDG**

NOT CLASSIFIED AS "DANGEROUS GOODS"

**Air transport in accordance with IATA**

NOT CLASSIFIED AS "DANGEROUS GOODS"

**14.3 Transport hazard class(es)**

See SECTION 14.2 in accordance with UN shipping name

**14.4 Packing group**

See SECTION 14.2 in accordance with UN shipping name

**14.5 Environmental hazards**

See SECTION 14.2 in accordance with UN shipping name

**Pelikan Hardcopy Production AG****8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 8 / 9

**14.6 Special precautions for user**

Relevant information under SECTION 6 to 8.

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

not applicable

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EEC-REGULATIONS** 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

**TRANSPORT-REGULATIONS** DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).

**NATIONAL REGULATIONS (GB):** EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people no

- VOC (1999/13/CE) < 1 %

**15.2 Chemical safety assessment**

not applicable

**SECTION 16: Other information****16.1 R-phrases (SECTION 3)**

R 22: Harmful if swallowed.  
R 36: Irritating to eyes.

**16.2 Hazard statements (SECTION 3)**

H319 Causes serious eye irritation.  
H302 Harmful if swallowed.

**16.3 Abbreviations and acronyms:**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
ELINCS = European List of Notified Chemical Substances  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
TLV®/TWA = Threshold limit value – time-weighted average  
TLV®STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

**16.4 Other information**



**Pelikan Hardcopy Production AG**  
**8620 Wetzikon**

Date printed 16.09.2013, Revision 10.09.2013

Version 02. Supersedes version: 01

Page 9 / 9

**Modified position**

SECTION 12 been added: Based on all available information not to be classified as PBT or vPvB respectively.

SECTION 8 been added: Not required under normal conditions.

SECTION 8 been added: light protective clothing

SECTION 8 been added: Take off contaminated clothing and wash before reuse.

SECTION 7 been added: Prevent penetration into the ground.

SECTION 7 been added: Do not store together with food and animal food/diet.

SECTION 4 deleted: In case of contact with eyes rinse thoroughly with water.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 4 been added: If eye irritation persists: Get medical advice/attention.

SECTION 4 been added: Take off contaminated clothing and wash before reuse.

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