

Pelikan Hardcopy Production AG

8620 Wetzikon

Date printed 16.09.2013, Revision 11.09.2013

Version 02. Supersedes version: 01

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SECTION 1: Identification of the substance / preparation and of the company**1.1 Product identifier****22-313****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]**

see SECTION 16

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.

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SECTION 3: Composition / Information on ingredients**Product-type:**

The product is a mixture.

| Range [%] | Substance |
|-----------|--|
| 1 - <10 | 2-pyrrolidone CAS: 616-45-5, EINECS/ELINCS: 210-483-1, ECB-Nr.: 01-2119475471-37-xxxx GHS/CLP: Eye Irrit. 2: H319 |
| 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

Irritant effects

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 with the local regulations.

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.

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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 within 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

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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 ³ |
| | Short-term exposure (15-minute): 15 ppm, 101,2 mg/m ³ |
| 1 - <10 | Glycerol |
| | CAS: 56-81-5, EINECS/ELINCS: 200-289-5 |
| | Long-term exposure: 10 mg/m ³ , (mist) |

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 ³ |
| | Short-term (15-minute): 15 ppm, 101,2 mg/m ³ |

DNEL

| Range [%] | Substance |
|-----------|--|
| 1 - <10 | 2-pyrrolidone, CAS: 616-45-5 |
| | general population, oral, Long-term - systemic effects: 5,2 mg/kg. |
| | general population, oral, Acute - systemic effects: 33,3 mg/kg. |
| | Industrial, dermal, Acute - systemic effects: 277 mg/kg. |
| | general population, dermal, Acute - systemic effects: 167 mg/kg. |
| | general population, dermal, Long-term - systemic effects: 6 mg/kg. |
| | Industrial, dermal, Long-term - systemic effects: 10 mg/kg. |
| | general population, inhalative, Long-term - systemic effects: 17,1 mg/m ³ . |
| 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 ³ . |
| | general population, inhalative, Long-term - systemic effects: 34 mg/m ³ . |
| | worker, inhalative, Long-term - systemic effects: 67,5 mg/m ³ . |
| | general population, dermal, Long-term - systemic effects: 10 mg/kg. |

PNEC

| Range [%] | Substance |
|-----------|--|
| 1 - <10 | 2-pyrrolidone, CAS: 616-45-5 |
| | fresh water, 0,5 mg/l. |
| | sediment (fresh water), 0,42 mg/kg. |
| | sewage treatment plants (STP), 10 mg/l. |
| | marine water, 0,05 mg/l. |
| | soil, 0,0612 mg/kg. |
| 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. |

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8.2 Exposure controls

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

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

| | |
|--|--------------------------------|
| Form | liquid |
| Color | blue |
| Odor | characteristic |
| Odour threshold | not determined |
| pH-value | 9,3 |
| pH-value [1%] | not determined |
| Boiling point [°C] | not determined |
| Flash point [°C] | not applicable |
| Flammability [°C] | not determined |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Oxidizing properties | no |
| Vapour pressure/gas pressure [kPa] | not determined |
| Density [g/ml] | 1,06 (20 °C / 68,0 °F) |
| Bulk density [kg/m³] | not applicable |
| Solubility in water | miscible |
| Partition coefficient [n-octanol/water] | not determined |
| Viscosity | 1,95 mm ² /s (20°C) |
| Relative vapour density determined in air | not applicable |
| Evaporation speed | not applicable |
| Melting point [°C] | not determined |
| Autoignition temperature [°C] | not applicable |
| Decomposition temperature [°C] | 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.

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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 - <10 | 2-pyrrolidone, CAS: 616-45-5 |
| | LD50, dermal, Rabbit: > 2000 mg/kg (OECD 402). |
| | LD50, oral, > 5000 mg/kg (calculated). |
| | LC0, inhalative, 0,061 mg/l 8h. |
| 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 - <10 | 2-pyrrolidone, CAS: 616-45-5 |
| | (72h), <i>Scenedesmus subspicatus</i> : > 500 mg/l. |
| | EC50, (48h), <i>Daphnia magna</i> : > 500 mg/l. |
| | LC50, (96h), <i>Brachidanio rerio</i> : > 4600 - 9935 mg/l OECD 203 Static. |
| 1 - <5 | 2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5 |
| | LC50, (96h), <i>Lepomis macrochirus</i> : 1300 mg/l (IUCLID). |
| | EC50, (48h), <i>Daphnia magna</i> : > 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

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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

None known.

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.

Disposal in an incineration plant in accordance with the regulations of the local authorities.

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

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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) 0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

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

Hazard pictograms



Signal word

WARNING

Eye Irrit. 2: H319 Causes serious eye irritation.

16.2 R-phrases (SECTION 3)

R 36: Irritating to eyes.

16.3 Hazard statements (SECTION 3)

H319 Causes serious eye irritation.

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16.4 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

16.5 Other information**Modified position**

SECTION 2 been added: Eye Irrit. 2
 SECTION 8 been added: Take off contaminated clothing and wash before reuse.
 SECTION 8 been added: light protective clothing
 SECTION 8 been added: Not required under normal conditions.
 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 been added: Irritant effects
 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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