

Pelikan Hardcopy Production AG

8620 Wetzikon

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

22-483

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 telephone number****Company** +41 (0) 44 9861-299 Mo-Fr 8:00-17:00**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

No classification.

2.2 Label elements**Hazard pictograms****Hazard statements** none**Special labelling** EUH210 Safety data sheet available on request.**2.3 Other hazards****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.**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, Reg-No.: 01-2119475471-37-XXXX
	GHS/CLP: Eye Irrit. 2: H319
1 - <10	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1
	GHS/CLP: Acute Tox. 4: H302 - STOT RE 2: H373

Comment on component partsSubstances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

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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 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 mixtureRisk 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.**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

The normal safety precautions for handling chemicals must be observed.

The product is not combustible.

Wash hands before breaks and after work.

Use barrier skin cream.

Take off contaminated clothing and wash before reuse.

Do not eat, drink, smoke or take drugs at work.

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)**

Substance
Glycerol
CAS: 56-81-5, EINECS/ELINCS: 200-289-5
Long-term exposure: 10 mg/m ³ , (mist)
Carbon Black
CAS: 1333-86-4, EINECS/ELINCS: 215-609-9, Reg-No.: 01-2119384822-32-XXXX
Long-term exposure: 3,5 mg/m ³
Short-term exposure (15-minute): 7 mg/m ³
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 ³ , Vapour, particulate: 10 mg/m ³
Short-term exposure (15-minute): 40 ppm, 104 mg/m ³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Ethylene glycol
CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1
Eight hours: 20 ppm, 52 mg/m ³ , H
Short-term (15-minute): 40 ppm, 104 mg/m ³

DNEL

Substance
2-pyrrolidone, CAS: 616-45-5
Industrial, inhalative, Long-term - systemic effects: 57,8 mg/m ³ .
Industrial, dermal, Long-term - systemic effects: 10 mg/kg.
Industrial, dermal, Acute - local effects: 277 mg/kg bw/day.
general population, oral, Acute - local effects: 33,3 mg/kg bw/day.
general population, dermal, Acute - local effects: 167 mg/kg bw/day.
general population, inhalative, Long-term - systemic effects: 17,1 mg/m ³ .
general population, oral, Long-term - systemic effects: 5,2 mg/kg.
general population, dermal, Long-term - systemic effects: 6 mg/kg.

PNEC

Substance
2-pyrrolidone, CAS: 616-45-5
soil, 0,0612 mg/kg.
sewage treatment plants (STP), 10 mg/l.
sediment (freshwater), 0,42 mg/kg.
seawater, 0,05 mg/l.
freshwater, 0,5 mg/l.

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8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,4mm butyl rubber, > 120 min (EN 374) The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	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	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	black
Odor	characteristic
Odour threshold	not determined
pH-value	8,99
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising 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	2,14 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.

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10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Product
ATE-mix, inhalative, > 20 mg/l 4h.
ATE-mix, dermal, > 2000 mg/kg.
ATE-mix, oral, > 2000 mg/kg.
Substance
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.
Ethylene glycol, CAS: 107-21-1
LD50, dermal, Rabbit: 10600 mg/kg bw.
LD50, oral, Rat: 4700 mg/kg bw.

Serious eye damage/irritation	Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Skin corrosion/irritation	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Respiratory or skin sensitisation	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Specific target organ toxicity — single exposure	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Mutagenicity	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Reproduction toxicity	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Carcinogenicity	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
Aspiration hazard	Does not contain a relevant substance that meets the classification criteria.
General remarks	none

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SECTION 12: Ecological information

12.1 Toxicity

Substance
2-pyrrolidone, CAS: 616-45-5
(72h), <i>Scenedesmus subspicatus</i> : > 500 mg/l.
LC50, (96h), <i>Brachidanio rerio</i> : > 4600 - 9935 mg/l OECD 203 Static.
EC50, (48h), <i>Daphnia magna</i> : > 500 mg/l.
Ethylene glycol, CAS: 107-21-1
LC50, (96h), <i>Pimephales promelas</i> : >10000 mg/l.
EC50, (72h), <i>Pseudokirchneriella subcapitata</i> : >1000 mg/l.
EC50, (48h), <i>Daphnia magna</i> : 34440 mg/l.
NOEC, <i>Daphnia magna</i> : 24000 mg/l.
NOEC, fish: 6090 mg/l.

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

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.

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

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SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

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)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

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14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL 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 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830

TRANSPORT-REGULATIONS DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2016).

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

- Observe employment restrictions for people none

- VOC (2010/75/CE) < 1 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H373 May cause damage to organs through prolonged or repeated exposure.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

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16.2 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

16.3 Other information**Classification procedure****Modified position**

SECTION 15 been added: EUH210 Safety data sheet available on request.
 SECTION 2 deleted: P337+P313 If eye irritation persists: Get medical advice / attention.
 SECTION 2 deleted: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 SECTION 2 deleted: P280 Wear eye protection / face protection.
 SECTION 2 deleted: P102 Keep out of reach of children.
 SECTION 2 deleted: P101 If medical advice is needed, have product container or label at hand.
 SECTION 2 deleted: Eye Irrit. 2
 SECTION 2 deleted: H319 Causes serious eye irritation.
 SECTION 2 deleted: WARNING
 SECTION 2 deleted: exclamation mark
 SECTION 8 been added: Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
 SECTION 12 been added: Spillages may penetrate the soil causing ground water contamination.
 SECTION 13 been added:
 SECTION 16 deleted: Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.

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