Section 1: Designation of the substance or the mixture, and of the company

1.1 Product identifier
- Name of substance / trade name: Test inks 40 – 44mN/m
- Product number:
  - Ink 40: 100034742
  - Ink 42: 100034743
  - Ink 44: 100022142
  - Ink 46: 100034744

Other designations:
- Test inks

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

Relevant identified uses:
- Testing of surface energy on components.

Uses advised against:
- Application to hot surfaces.

1.3 Information on the supplier who provides the Safety Data Sheet

Manufacturer / Supplier: Diener electronic GmbH & Co. KG

Address: Nagolder Str. 61

Country ID/PO code/town: 72224 Ebhausen

Contact person for technical information:
- Mr Christof Diener

Phone / email:
- +49 74 58 – 999 31 - 542 / info@plasma.com

1.4 Emergency phone

Section 2: Potential hazards

2.1 Classification of the substance or mixture
- Classification pursuant to Directive (EC) No. 1272/2008

| Acute Tox. 3 | H331 | Toxic to health if inhaled |
| Repr. 1B     | H360FD | May impair fertility. May cause harm to the unborn child. |
| Acute Tox. 4 | H302  | Hazardous to health if ingested |
| STOT RE 2    | H373  | May cause damage to organs through prolonged or repeated exposure. |
| Carc. 2      | H351  | Suspected of causing cancer |

2.2 Identifying elements

Identifying elements pursuant to Directive (EC) No. 1272/2008
The substance is classified and labelled pursuant to the CLP Directive.

Hazard pictograms

GHS06  GHS07  GHS08

Signal word: Danger

Hazard statements

H302  Hazardous to health if ingested
H331  Toxic to health if inhaled
H360FD  May impair fertility. May cause harm to the unborn child.
H351  Suspected of causing cancer
H373  May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
      No smoking.
P271  Use only outdoors or in a well-ventilated area.
P304+P313  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313  IF exposed or concerned: Get medical advice/attention.
P403+P233  Store in a well-ventilated place. Keep container tightly closed.

Additional information:
For commercial users only.

2.3  Other hazards

This substance/this mixture does not contain any components in concentrations of 0.1% or higher which are classified as either Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB).

Section 3: Composition/information on components

3.2  Mixtures

Name of substance: 2-Ethoxy-ethanol
EC No.: 203-804-1
CAS No.: 110-80-5
REACH registration no.: There is no registration number for this substance since the substance and its use are exempt from registration, no registration of the annual tonnage is required, or registration is scheduled for a later point in time.
Ratio of ink 40: 35%
Ratio of ink 42: 30%
Ratio of ink 44: 20%
Ratio of ink 46: 17%

Classification pursuant to Directive (EC) No. 1272/2008:

Signal word Hazard

H226 Flammable liquid and vapour.
H302 Hazardous to health if ingested.
H331 Toxic if inhaled.
H360FD May impair fertility. May cause harm to the unborn child

Name of substance: Formamide
EC No.: 200-842-0
CAS No.: 75-12-7
REACH registration no.: 01-2119496064-35-xxxx

Ratio of ink 40: 65%
Ratio of ink 42: 70%
Ratio of ink 44: 80%
Ratio of ink 46: 83%

Classification pursuant to Directive (EC) No. 1272/2008:

Signal word Hazard

H351 Suspected of causing cancer.
H360FD May impair fertility. May cause harm to the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Substances of very high concern (SVHC)

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS no.</th>
<th>Wght-%</th>
<th>Listed in</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formamide</td>
<td>75-12-7</td>
<td>0-50</td>
<td>Candidate list</td>
<td>Repr. A57c</td>
</tr>
<tr>
<td>2-Ethoxy-ethanol</td>
<td>110-80-5</td>
<td>50-100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
Candidate list Substances meeting the criteria of Article 57 and eligible for inclusion in Annex XIV
Repr. A57c Teratogenic (Article 57c)
Section 4: First aid measures

4.1 Description of the first aid measures

In case of aspiration
   Provide fresh air. If symptoms occur or in case of doubt, seek medical advice.

In case of skin contact
   Skin contact is considered the most frequent type of exposition to test inks at the workplace. Immediately wash skin with plenty of water and soap. If necessary, seek medical advice.

In case of eye contact
   As a precaution, rinse eyes with water. If symptoms occur, seek medical advice.

In case of ingestion
   Have person rinse their mouth and drink a glass of water. Do not induce vomiting. Seek medical advice immediately and show this container or label.

4.2 Main acute and delayed symptoms and effects

Respiratory distress
Dizziness
Vertigo
Nausea
Vomiting
Headache

4.3 Information on immediate medical help or special treatments

No data available.

Section 5: Firefighting measures

5.1 Extinguishing agents

Suitable: Adapt fire extinguishing measures to the surroundings.
   CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam
Unsuitable: depending on environment

5.2 Special hazards posed by the substance or mixture

May form explosive mixtures with air when heated.
In case of fire, formation of dangerous fire gases and vapours possible.
May be released in case of fire:
   Carbon monoxide and carbon dioxide

5.3 Notes for firefighting

If possible, remove the container from the hazard zone.
Other information Vapours heavier than air. Pay attention to backfire

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use the specified personal protective equipment. See sections 8. Avoid contact with eyes and skin. Do not breath in vapour/aerosol.

6.2 Environmental precautions
Dilute with plenty of water. Absorb spilled liquids with universal binder (e.g. diatomaceous earth, vermiculite, sand) and dispose of according to regulations.
Clean soiled items and floors.
Prevent release into the sewers or to the surface and ground water.

6.3 Methods and materials for containment and cleaning up
Absorb spilled liquids with absorptive agents, such as: sand, vermiculite or powdered limestone. Place in suitable, sealed containers for disposal and dispose of according to regulations. Ensure sufficient ventilation.

6.4 Reference to other Section
For information on safe handling, see section 7.
For information on safe personal protective equipment, see section 8.
For information on disposal, see section 13

Section 7: Handling and storage

7.1 Precautions for safe handling
Handling according to the Laboratories Directives (TRGS 526)
Do not leave bottles open.
General hygiene:
- Do not eat, drink or smoke in areas where work is done.
- Wash your hands thoroughly after using the substance.
- Ensure good ventilation/extraction at the workplace.

Fire and explosion protection measures
Keep away from sources of ignition – do not smoke.
Take measures to protect from electrostatic charge.
Have breathing apparatus equipment available on site.

7.2 Conditions for safe storage, including any incompatibilities

Information on storage conditions
Do not refill inks. Keep in original container only.
Keep containers tightly closed.
Store at room temperature.
Keep in a dry place.
Protect from overheating/warming.
Store separate from food.

Requirements in storage rooms and containers
Storage class 6.1C (flammable, acutely toxic cat. 3 / hazardous substances with toxic or chronic effects)

Only substances of the same storage class should be stored together.
Storage of the substance or mixture together or jointly with the following substances is prohibited:
- pharmaceuticals, food or forage, including their additives;
- infectious, radioactive and explosive substances;
- gases;
- other explosive substances of storage class 4.1A;
- heavily oxidising substances of storage class 5.1A;
- ammonium nitrate and preparations containing ammonium nitrate;
- organic peroxides and self-reactive substances.
Storing of the substance or mixture together or jointly with the following substances is permitted under certain conditions only (for details, refer to TRGS 510):
- pyrophoric substances;
- substances which release flammable gases when in contact with water;
- oxidising substances of storage class 5.1B.
The substance should not be stored together or jointly with substances with which hazardous chemical reactions are possible.

Storage together with the test inks 30–38 mN/m and 48–105 mN/m is possible without any restrictions.

Storage class: 6.1C

Classification according to the German Health and Safety at Work Regulations (BetrSichV)
Combustible

7.3 Specific end uses
Industry- and sector-specific guidelines
Please refer to our Technical Data Sheet for additional information.
Replacement product with smaller health hazards: Diener non-toxic / coloured test inks

Section 8: Limiting and monitoring exposure / personal protective equipment

8.1 Parameters to be monitored

Limit values for exposure at the workplace and/or biological limit values

Workplace limit values (Arbeitsplatzgrenzwerte, AGW) applicable in Germany

Name of substance: 2-Ethoxy-ethanol; CAS: 110-80-5
Basis: TRGS 900 - Workplace limit values
Value: 7.6 mg/m³, 2 ml/m³ (ppm)
Peak limit: Excess factor 8 (II)
Duration 15 min, average; 4 x per shift, intervals of 1 h
Category II – Substances with a resorptive effect
Biological limits
(biologische
Grenzwerte, BGW)
Germany

Name of substance: 2-
Ethoxy-ethanol; CAS:
110-80-5
Parameters:
Limit: Ethoxy acetic acid
50 mg/l
Material: Urine
Sampling: With long-term exposure: at the end of a shift after several previous shifts
Teratogenic:
Group B
Even with compliance with the AGW and BGW, a teratogenic hazard cannot be excluded.

Hazard of resorption by
skin

Relevant DNEL/DMEL/PNEC and other threshold values relevant for human health

Formamide; CAS: 75-112-7
DNEL (oral, chronic): Not determined
DNEL (by skin, chronic) 952 µg/kg
DNEL (by inhalation, chronic) 6.6 mg/m3

2-Ethoxy-ethanol; CAS: 110-80-5
DNEL (oral, chronic): Not determined
DNEL (by skin, chronic) 300 µg/kg
DNEL (by inhalation, chronic) 83 µg/m3

Values relevant for the environment: (PNEC)

2-Ethoxy-ethanol; CAS: 110-80-5

<table>
<thead>
<tr>
<th>End point</th>
<th>Threshold value</th>
<th>Environmental compartment</th>
<th>Duration of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC</td>
<td>1 mg/l</td>
<td>Sweet water</td>
<td>Short-term (single exposure)</td>
</tr>
<tr>
<td>PNEC</td>
<td>100 µg/l</td>
<td>Sea water</td>
<td>Short-term (single exposure)</td>
</tr>
<tr>
<td>PNEC</td>
<td>1 g/l</td>
<td>Sewage plant</td>
<td>Short-term (single exposure)</td>
</tr>
</tbody>
</table>

Formamide; CAS: 75-12-7

<table>
<thead>
<tr>
<th>End point</th>
<th>Threshold value</th>
<th>Environmental compartment</th>
<th>Duration of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC</td>
<td>0.5 mg/l</td>
<td>Sweet water</td>
<td>Short-term (single exposure)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.5 mg/l</td>
<td>Sea water</td>
<td>Short-term (single exposure)</td>
</tr>
<tr>
<td>PNEC</td>
<td>100 mg/l</td>
<td>Sewage plant</td>
<td>Short-term (single exposure)</td>
</tr>
<tr>
<td>PNEC</td>
<td>1.26 mg/kg</td>
<td>Sweet water sediment</td>
<td>Short-term (single exposure)</td>
</tr>
</tbody>
</table>
8.2 Limiting and monitoring exposure

Suitable technical control equipment

The usual precautions when handling chemical agents must be applied. Wash your hands before breaks and at the end of work. Do not eat, drink or smoke at the workplace.

Pregnant women should absolutely avoid any inhalation and skin contact.

Keep away from food, drink and forage.

Immediately take off all contaminated, soaked clothing.

Store the protective clothing separately.

Avoid contact with eyes and skin

Individual protective measures – personal protective equipment

The design of personal protective equipment must be selected depending on the concentration and quantity of hazardous substances specific to the respective workplace. The chemical resistance of the protective equipment should be clarified with the suppliers.

Eye / face protection

Wear protective glasses. To protect your eyes, use only eyewear tested and approved according to official standards, such as NIOSH (US) or EN 166 (EU).

Skin protection

Wear gloves for work. Check the gloves for intactness before putting them on.

Remove them without touching the outside surface of the gloves to avoid skin contact with this product.

Dispose of contaminated gloves after use in compliance with the statutory regulations and good laboratory practice. Wash and dry your hands.

The selected protective gloves must meet the specifications of the EC Directive 2016/425 and the derived standard EN 374.

Gloves

Glove material

Butyl rubber, strength: 0.7 mm

The selection of a suitable glove not only depends on the material but also on additional quality features which are different for each manufacturer.

Permeation time of the glove material

Permeation value: Level ≥ 6 (>480 min)

The exact penetration time must be obtained from the protective glove manufacturer and must be observed.

Other skin protection

Impermeable protective clothing. The type of protective equipment must be selected in keeping with the concentration and quantity of the hazardous substance at the workplace.

Breathing protection

Breathing protection is required in case of: formation of aerosol or mist. Type: A (against organic gases and vapours with boiling point > 65 °C, code colour: brown).

The wearing time limits according to GefStoffV in connection with the Regulations for the Use of Respiratory Protective Equipment (BGR 190) must be observed.

Limiting and monitoring environmental exposure
Prevent release into the sewers or to the surface and ground water.

### Section 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

**Optical appearance**
- **Aggregate state:** Liquid
- **Colour:** transparent

**Odour:** Like ether - ammonia

**Odour threshold:** Not determined

**pH value:**
- **Ink 40 - 46:** 7.0

**Melting point / freezing point:** Not determined

**Initial boiling point and boiling range:**
- **Ink 40 -46:** >190 °C

**Flash point:**
- **Ink 40:** 70 °C
- **Ink 42:** >60 °C
- **Ink 44:** >60 °C
- **Ink 46:** >60 °C

**Evaporation rate:** Not determined

**Flammability (solid, gaseous):** Not applicable

**Upper/lower flammability or explosion limits:** Not determined

**Vapour pressure:** Not determined

**Vapour density:** Not determined

**Relative density:**
- **Ink 40:** 1.054
- **Ink 42:** 1.08
- **Ink 44:** 1.096
- **Ink 46:** 1.106

**Solubility:** Soluble in water

**Distribution coefficient:**
- **n-Octanol/water :** 0.32 log POW
- **CAS: 110-80-5:** -0.32 log POW
- **CAS: 75-12-7:** -0.82 (25 °C) log KOW (ECHA)

**Spontaneous ignition temperature:** Not applicable

**Decomposition temperature:** Not determined
9.2 Other data
Surface tension 40 - 46 mN/m at 20 °C

Section 10: Stability and reactivity

10.1 Reactivity
Vapours may form an explosive mixture with air

Chemical stability
10.2 Under normal environmental conditions and the temperature and pressure conditions to be expected during storage and handling, the material is stable.

10.3 Risk of hazardous reactions
Exothermic reaction with: alkalis, oxidation agents
Risk of explosion: phosphoroxide, hydrogen peroxide

10.4 Conditions to be avoided
Heat, flames, sparks and hot surfaces. Temperatures above 140 °C

10.5 Incompatible materials
Strong oxidizing agents, strong acids, aluminium, light metals and copper

10.6 Hazardous decomposition products
Hazardous combustion products: see sections 5.

Section 11: Toxicology

11.1 Information on toxicological effects

Acute toxicity

2-Ethoxy-ethanol; CAS: 110-80-5
LD₅₀ (oral, rats): 500mg/kg (conversion value)

Formamide; CAS: 75-112-7
LD₅₀ (oral, rat): 5,325 mg/kg (published value ECHA source 1)

ATEₚₓₓ  LD₅₀ oral
Ink 40  1,178mg/kg
Ink 42  1,420mg/kg
Ink 44  1,705mg/kg
Ink 46  2,017mg/kg
2-Ethoxy-ethanol; CAS: 110-80-5
LD50 (by skin, rabbit): 3,300 mg/kg (published value, source 3)

Formamide; CAS: 75-112-7
LD50 (by skin, rabbit): 17,000 mg/kg (published value, source 3)

ATE mix LD50 by skin

<table>
<thead>
<tr>
<th>Ink</th>
<th>LD50 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>6,759</td>
</tr>
<tr>
<td>42</td>
<td>7,787</td>
</tr>
<tr>
<td>44</td>
<td>8,885</td>
</tr>
<tr>
<td>46</td>
<td>9,966</td>
</tr>
</tbody>
</table>

2-Ethoxy-ethanol; CAS: 110-80-5
LC50 (by inhalation, vapour, rat, 4h): 3mg/l (conversion value)

Formamide; CAS: 75-112-7
LC50 (by inhalation, vapour, rat, 4h): 21 mg/kg /l (published value ECHA source 1)

ATE mix LC50 by inhalation, vapours

<table>
<thead>
<tr>
<th>Ink</th>
<th>LC50 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>44</td>
<td>9</td>
</tr>
<tr>
<td>46</td>
<td>10</td>
</tr>
</tbody>
</table>

**Burning/irritating effect on the skin**
The mixture has not been classified. Minor irritation is possible.
Hazard of resorption by skin

**Severe eye damage/irritation**
The mixture has not been classified. Minor irritation is possible.

**Sensitising of the respiratory tract/skin**
The mixture has not been classified. The mixture does not contain any substances classified as sensitising.

**Germ cell mutagenicity**
The mixture has not been classified. The mixture does not contain any substances classified as mutagenic.

**Carcinogenicity**
Suspected of causing cancer. The inks 40 – 46 contain a component classified as category 2 (suspected of causing cancer), which is present in a concentration of more than 1%.

**Toxicity to reproduction**
May impair fertility.
May cause harm to the unborn child.

**Specific target organ systemic toxicity with single exposure**
The mixture has not been classified. The mixture contains no substances classified as specifically target organ systemic toxic with single exposure.
Specific target organ systemic toxicity with multiple exposure
May cause damage to organs through prolonged or repeated exposure.
The inks 40 – 46 contain a component classified as category 2, which is present in a concentration of more than 10%.

Aspiration hazard
The mixture has not been classified. The mixture does not contain any substances classified as hazardous on aspiration.

Symptoms and effects (delayed and chronic) with information about type of exposure

After inhalation of large amounts
Vertigo
Headache
Unconsciousness

After swallowing of large amounts
Nausea
Vomiting

After resorption of large amounts
Loss of consciousness
Liver and kidney damage Loss of postural reflexes and ataxia (lack of voluntary coordination of muscle movements).

Section 12: Ecological information

12.1 Toxicity

2-Ethoxy-ethanol; CAS: 110-80-5 (published value ECHA source 2)
Toxicity to fish (LC50, 96h): 10 g/L
Toxicity to daphnia (EC50, 24h): 10 g/L
Toxicity to algae (NOEC, 72h): 1 g/L
Toxicity to micro-organisms (EC0, 24h): 10 g/L

Formamide; CAS: 75-12-7 (published value ECHA source 1)
Toxicity to fish (LC50, 96h): 6,569 g/L
Toxicity to daphnia (EC50, 48h): 500 mg/L
Toxicity to algae (NOEC, 72h): 125 mg/L
Toxicity to micro-organisms (EC50, 30min): 1 g/L

12.2 Persistence and degradability
Biological degradability: 90-100 % / 28d (OECD 301E)
Readily biodegradable

12.3 Bioaccumulative potential
Due to the n-Octanol/water partition coefficient, accumulation in organisms is not to be expected.

12.4 Mobility in the soil
Formamide; CAS: 75-12-7
The adsorption coefficient standardised for organic carbon 0.177
12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable

12.6 Other adverse effects

No other relevant information available.

Section 13: Disposal considerations

13.1 Waste treatment methods

Treatment of contaminated packages

Have residual volumes and non-reusable solutions disposed of by a recognized disposal company. Dispose of the content/container in keeping with the local/regional/national/international waste disposal regulations.

Waste code according to List of Wastes Regulation (LoW)

070104* (other organic solvents, washing liquids & mother liquors)

Non-cleaned packaging

Non-dried out packaging containing residues must be disposed of as containers containing hazardous residues.

150110 (Packages contaminated with hazardous substances or containing residues thereof)

Cleaned packaging

Non-contaminated, clean packaging can be recycled. Glass waste. Recommended cleaning agent: water

Special precautions

The product and its container must be disposed of as hazardous waste.

Appropriate EU or other regulations

The allocation of a waste code number in accordance with the European Waste Catalogue (AVV) is to be carried out in consultation with the regional waste disposal company.

Section 14: Transport information (source 4)

14.1 UN number

UN 2810

14.2 UN proper shipping name

ADR/RID

TOXIC ORGANIC LIQUID, N.O.S (ETHYLENE GLYCOLMONOETHYLETHERVER UN1171, FORMAMIDE, UN-)

IMDG Code / ICAO-TI / IATA-DGR

TOXIC LIQUID, ORGANIC, N.O.S.

14.3 Transport hazard classes

6.1 (Tox organic liquid)

14.4 Packing group

III

14.5 Environmental hazards
Identification of environmentally hazardous substances

ADR/RID / IMDG code / ICAO-TI / IATA-DGR: ☐ yes / ☑ no
Marine Pollutant: ☐ yes / ☑ no

14.6 Special precautions for user
See sections 6-8

14.7 Transport in bulk according to Appendix II of the MARPOL Convention and the IBC Code

Contamination category (X, Y or Z): Not specified
Vessel type (1, 2 or 3): Not specified

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulations

Regulation (EC) No. 2037/2000 (Substances that deplete the ozone layer):
Not listed.

Regulation (EC) No. 850/2004 (Persistent hazardous substances, organic):
Not listed.

Regulation (EC) No. 689/2008 (Import and export of hazardous chemicals):
Not listed.

Regulation (EC) No. 648/2004 (Regulation of detergents):
Not listed.

Restrictions according to Title VIII of Regulation (EC) No. 1907/2006:
Not applicable.

National laws (Germany)

Water hazard class

WGK 2 (self-assessed): hazardous to water.

2-Ethoxy-ethanol; CAS: 110-80-5: WGK 2
ID number 5058 Classification acc. to AwSV, Enclosure 1 (4)

Formamide; CAS: 75-12-7: WGK 1
ID number 1509 Classification acc. to AwSV, Enclosure 1 (4)

Solvents Regulation (31. BImSchV)

VOC ratio: 100% (formamide; CAS: 75-12-7)

Hazardous Incident Ordinance (12. BImSchV)
Enclosure I, no. 6

Storage class pursuant to TRGS 510:

6.1C (flammable, acutely toxic cat. 3 / hazardous substances with toxic or chronic effects)

TA Luft (Technical Instructions on Air Quality Control)
Class: NK
Ratio: 100% (2-Ethoxy-ethanol; CAS: 110-80-5)
Other relevant regulations

Substances of very high concern (SVHC)

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS no.</th>
<th>Wght-%</th>
<th>Listed in</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formamide</td>
<td>75-12-7</td>
<td>0-50</td>
<td>Candidate list</td>
<td>Repr. A57c</td>
</tr>
<tr>
<td>2-Ethoxy-ethanol</td>
<td>110-80-5</td>
<td>50-100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
- Candidate list: Substances meeting the criteria of Article 57 and eligible for inclusion in Annex XIV
- Repr. A57c: Teratogenic (Article 57c)

15.2 Chemical safety assessment

No chemical safety assessment was carried out on the mixture.

Section 16: Other data

Revisions compared to last version

No revisions made.

Literature references and sources for data

Regulations


Source 1 [https://echa.europa.eu/de/brief-profile/-/briefprofile/100.000.766](https://echa.europa.eu/de/brief-profile/-/briefprofile/100.000.766)
Source 3 Toxicological Data, compiled by the National Institute of Health (NIH), USA, selected and distributed by Technical Database Services (TDS), New York, 2009
Source 4 [https://adrdangerousgoods.com/ger/substances/0002020/un2810-giftiger-organischer-flussiger-stoff-n-a-g/](https://adrdangerousgoods.com/ger/substances/0002020/un2810-giftiger-organischer-flussiger-stoff-n-a-g/)

Internet

GESTIS-Stoffdatenbank (dguv.de)
[www.baua.de](http://www.baua.de)
[www.qischem.de](http://www.qischem.de)

Methods pursuant to Article 9 of Regulation (EC) No. 1272/2008 for evaluation of the information used for classification purposes

Physical hazards: Evaluation of test data (flash point, boiling point, pH value)
Health and environmental hazards: Mathematical method

Wording of the hazard statements and/or safety statements referred to in Sections 2 to 15

- **H302** Hazardous to health if ingested
- **H331** Toxic to health if inhaled
- **H360FD** May impair fertility. May cause harm to the unborn child
- **H351** Suspected of causing cancer
- **H373** May cause damage to organs through prolonged or repeated exposure.
Safety Data Sheet pursuant to Directive (EC) No. 1907/2006

Prepared on: 2021-05-28
Revised on: 2021-07-01
Valid from: 03/2021
Version: 1
Replaces version: -

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only outdoors or in a well-ventilated area.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P403+ P233 Store in a well-ventilated place. Keep container tightly closed.
Acute Tox. 3 Acute toxicity, category 3
Repr. 1B Toxicity to reproduction, category 1B
Acute Tox. 4 Acute toxicity, category 4
STOT RE 2 Specific target organ systemic toxicity (repeated exposure), category 2
Carc. 2 Carcinogenicity, category 2

Training for employees
Working with this hazardous substance does not require any mandatory training.
Please contact Diener electronic for information on proper handling of these test inks.
Safety Data Sheet pursuant to Directive (EC) No. 1907/2006

Legend
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
AwSV German Ordinance on Installations for the Handling of Substances Hazardous to Water
BImSchV German Air Pollution Control Act
CAS Chemical Abstracts Service
DIN Standard of the Deutsches Institut für Normung
EC Effective Concentration
EC European Community
EN European Standard
IATA-DGR International Air Transport Association-Dangerous Goods Regulations
IBC Code International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI International Civil Aviation Organization-Technical Instructions
IMDG-Code International Maritime Code for Dangerous Goods
ISO Standard of the International Standards Organization
IUCLID International Uniform Chemical Information Database
LC Lethal Concentration
LD Lethal Dose
log Kow octanol-water partition coefficient
MARPOL International Convention for the Prevention of Pollution from Ships
OECD Organisation for Economic Co-operation and Development
PBT Persistent, bio-accumulative, toxic
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
TRGS Technical Regulations for Hazardous Substances
UN United Nations
VOC Volatile Organic Compounds
vPvB very persistent and very bio-accumulative
VwVwS German Administrative Regulation Regarding Water Pollutants
WGK German Water Hazard Class

Additional information

Disclaimer
To our best knowledge, the specifications in this Safety Data Sheet correspond to the state of know-how at the time of printing. The information is intended to provide guidance on the safe handling of the product specified in this Safety Data Sheet during storage, processing, transport and disposal. The information cannot be applied to other products. Insofar as the product is mixed, blended or processed with other materials or subjected to treatment, the information in this Safety Data Sheet cannot be transferred to the new material thus produced, unless expressly stated otherwise herein.