

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

- **1.1 Product identifier**
- **Trade name:** *ECO red N*
- **Article number:** 100000000825
- **Registration number**  
The ingredients of this ink meet the criteria of the Regulation 1907/2006/EC (REACH).
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** Ball Pen Ink
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
DOKUMENTAL GmbH & Co KG  
Woellnerstraße 26  
D-67065 Ludwigshafen  
Phone + 49(0)621/37702 321  
Fax + 49(0)621/37702 391  
www.dokumental.de
- **Further information obtainable from:**  
Technical Service, Dr. B. Polzin  
Tel.: +49-621-37702 322  
Mobile +49-1726204412  
E-Mail: bernd.polzin@dokumental.de
- **1.4 Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
+49 (0) 6132 / 84463  
Ingelheim, Deutschland

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Muta. 2                      H341 Suspected of causing genetic defects.



GHS05 corrosion

Eye Dam. 1                H318 Causes serious eye damage.



GHS07

Skin Irrit. 2                H315 Causes skin irritation.

Aquatic Chronic 3        H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
Phosphoric acid mono-bis-(2-ethylhexyl)-ester  
C.I. Solvent Orange 3
- **Hazard statements**  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H341 Suspected of causing genetic defects.  
H412 Harmful to aquatic life with long lasting effects.

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- **Precautionary statements**  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P321 Specific treatment (see on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 122-99-6 EINECS: 204-589-7 Reg.nr.: 01-2119488943-21	2-Phenoxyethanol ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	10-25%
CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35	2-methylpentane-2,4-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	10-25%
CAS: 509-34-2 EINECS: 208-096-8 Reg.nr.: 01-2120756578-38	C.I. Solvent Red 49 ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	2.5-10%
CAS: 12645-31-7 EINECS: 235-741-0 Reg.nr.: 01-2119896587-13	Phosphoric acid mono-bis-(2-ethylhexyl)-ester ⚠ Skin Corr. 1C, H314	2.5-10%
CAS: 495-54-5 EINECS: 207-803-7 Reg.nr.: 01-2120754909-37	C.I. Solvent Orange 3 ⚠ Muta. 2, H341; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	≤2.5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:**  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
If only a short-term loading of the glove material by splashes is expected, tricoted gloves with higher wearability for the better acceptance of the users are recommended.

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  
Nitrile rubber, NBR
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

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## SECTION 9: Physical and chemical properties

<ul style="list-style-type: none"> <li>· <b>9.1 Information on basic physical and chemical properties</b></li> <li>· <b>General Information</b></li> <li>· <b>Appearance:</b> <ul style="list-style-type: none"> <li>Form: Fluid</li> <li>Colour: According to product specification</li> </ul> </li> <li>· <b>Odour:</b> Product specific</li> <li>· <b>Odour threshold:</b> Not determined.</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Important information on protection of health and environment, and on safety.</b> -</li> </ul>	
· <b>pH-value at 20 °C:</b>	5.3
<ul style="list-style-type: none"> <li>· <b>Change in condition</b> <ul style="list-style-type: none"> <li>Melting point/freezing point: Undetermined.</li> <li>Initial boiling point and boiling range: 185 °C</li> </ul> </li> <li>· <b>Flash point:</b> 94 °C</li> <li>· <b>Flammability (solid, gas):</b> Not applicable.</li> <li>· <b>Ignition temperature:</b> 260 °C</li> <li>· <b>Decomposition temperature:</b> Not determined.</li> <li>· <b>Auto-ignition temperature:</b> Product is not selfigniting.</li> <li>· <b>Explosive properties:</b> Not determined.</li> <li>· <b>Explosion limits:</b> <ul style="list-style-type: none"> <li>Lower: 1 Vol %</li> <li>Upper: 12.6 Vol %</li> </ul> </li> <li>· <b>Vapour pressure at 20 °C:</b> 0.1 hPa</li> <li>· <b>Density at 20 °C:</b> 1.1 g/cm<sup>3</sup></li> <li>· <b>Relative density:</b> Not determined.</li> <li>· <b>Vapour density:</b> Not determined.</li> <li>· <b>Evaporation rate:</b> Not determined.</li> <li>· <b>Solubility in / Miscibility with water:</b> Not miscible or difficult to mix.</li> <li>· <b>Partition coefficient: n-octanol/water:</b> Not determined.</li> <li>· <b>Viscosity:</b> <ul style="list-style-type: none"> <li>Dynamic at 20 °C: 21,000 mPas</li> <li>Kinematic: Not determined.</li> </ul> </li> <li>· <b>Solvent content:</b> <ul style="list-style-type: none"> <li>Organic solvents: 52.6 %</li> <li>Solids content: 42.7 %</li> </ul> </li> <li>· <b>9.2 Other information</b> <ul style="list-style-type: none"> <li>The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.</li> </ul> </li> </ul>	

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

122-99-6 2-Phenoxyethanol

Oral	LD50	1,840 mg/kg (rat)
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**509-34-2 C.I. Solvent Red 49**

Oral LD50 1,830 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**  
Suspected of causing genetic defects.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

• **12.1 Toxicity**

• **Aquatic toxicity:**

**107-41-5 2-methylpentane-2,4-diol**

LC50 / 96h 8,510 mg/l (Fish)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

• **13.1 Waste treatment methods**

• **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• **European waste catalogue**

08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS

08 01 00 wastes from MFSU and removal of paint and varnish

08 01 13\* sludges from paint or varnish containing organic solvents or other hazardous substances

• **Uncleaned packaging:**

• **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

• **14.1 UN-Number**

• **ADR, ADN, IMDG, IATA** not applicable

• **14.2 UN proper shipping name**

• **ADR, ADN, IMDG, IATA** not applicable

• **14.3 Transport hazard class(es)**

• **ADR, ADN**

• **Class** not applicable

• **IMDG, IATA**

• **Class** not applicable

• **Label** -

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- |   |                 |
|---|-----------------|
| · 14.4 Packing group  |                 |
| · ADR, IMDG, IATA   | not applicable  |
| · 14.5 Environmental hazards:   | Not applicable. |
| · 14.6 Special precautions for user                                       | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation":  | not applicable  |

## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - National regulations:
  - Technical instructions (air):
- | Class | Share in % |
|-------|------------|
| NK    | 50-100     |
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
  - 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

- H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H341 Suspected of causing genetic defects.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity - Category 4  
Skin Corr. 1C: Skin corrosion/irritation - Category 1C  
Skin Irrit. 2: Skin corrosion/irritation - Category 2  
Eye Dam. 1: Serious eye damage/eye irritation - Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation - Category 2  
Muta. 2: Germ cell mutagenicity - Category 2  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3