

1 Identification

- **Product identifier**
- **Trade name:** DOCUFLUIDAL® EF 100 violet blue
- **Article number:** 100000001159
- **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
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DOKUMENTAL GmbH & Co KG Schreibfarben
Woellnerstraße 26
D-67065 Ludwigshafen
Phone + 49 (0)621/5402321
Fax + 49 (0)621/5402391
www. dokumental.de
- **Information department:**
Technical Service, Dr. B. Polzin
Tel.: +49-621-5402322
Mobile +49-1726204412
E-Mail: bernd.polzin@dokumental.de
- **Emergency telephone number:**
24-hour-Emergency- Telephone-Number (GBK Contract ID: 94050): (001) 352 323 3500

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H227 Combustible liquid.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard-determining components of labeling:**
C. I. Solvent Violet 8
Phosphoric acid mono-bis-(2-ethylhexyl)-ester
- **Hazard statements**
Combustible liquid.
Causes skin irritation.
Causes serious eye damage.
- **Precautionary statements**
Keep away from flames and hot surfaces. - No smoking.
Wear protective gloves / eye protection / face protection.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If skin irritation occurs: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 1
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

122-99-6	2-Phenoxyethanol	25-50%
100-51-6	Benzyl alcohol	10-25%
107-41-5	2-methylpentane-2,4-diol	10-25%
84281-86-7	C. I. Solvent Violet 8	2.5-10%
12645-31-7	Phosphoric acid mono-bis-(2-ethylhexyl)-ester	2.5-10%
6786-83-0	C. I. Solvent Blue 4: less than 0,1% Michler's Ketone	≤1.0%

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

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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.
Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **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.
- **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.

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Ensure adequate ventilation.

 • **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

 • **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

 • **Information about protection against explosions and fires:** No special measures required.

 • **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.

 • **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

 • **Additional information about design of technical systems:** No further data; see item 7.

 • **Control parameters**

 • **Components with limit values that require monitoring at the workplace:**
100-51-6 Benzyl alcohol (10-25%)

WEEL Long-term value: 10 ppm

107-41-5 2-methylpentane-2,4-diol (10-25%)

 REL Ceiling limit value: 125 mg/m³, 25 ppm

 TLV Ceiling limit value: 121 mg/m³, 25 ppm

 • **Additional information:** The lists that were valid during the creation were used as basis.

 • **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.

 • **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

 • **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

 • **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.

 • **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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9 Physical and chemical properties

<ul style="list-style-type: none"> Information on basic physical and chemical properties General Information Appearance: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Form:</td> <td>Fluid</td> </tr> <tr> <td>Color:</td> <td>Blue</td> </tr> </table> Odor: Recognizable Odour threshold: Not determined. 		Form:	Fluid	Color:	Blue
Form:	Fluid				
Color:	Blue				
<ul style="list-style-type: none"> Important information on protection of health and environment, and on safety. - 					
<ul style="list-style-type: none"> pH-value at 20 °C (68 °F): 7 					
<ul style="list-style-type: none"> Change in condition <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Melting point/Melting range:</td> <td>Undetermined.</td> </tr> <tr> <td>Boiling point/Boiling range:</td> <td>198 °C (388 °F)</td> </tr> </table> 		Melting point/Melting range:	Undetermined.	Boiling point/Boiling range:	198 °C (388 °F)
Melting point/Melting range:	Undetermined.				
Boiling point/Boiling range:	198 °C (388 °F)				
<ul style="list-style-type: none"> Flash point: 93 °C (199 °F) 					
<ul style="list-style-type: none"> Flammability (solid, gaseous): Not applicable. 					
<ul style="list-style-type: none"> Ignition temperature: 260 °C (500 °F) 					
<ul style="list-style-type: none"> Decomposition temperature: Not determined. 					
<ul style="list-style-type: none"> Auto igniting: Product is not selfigniting. 					
<ul style="list-style-type: none"> Danger of explosion: Not determined. 					
<ul style="list-style-type: none"> Explosion limits: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Lower:</td> <td>1.0 Vol %</td> </tr> <tr> <td>Upper:</td> <td>13.0 Vol %</td> </tr> </table> 		Lower:	1.0 Vol %	Upper:	13.0 Vol %
Lower:	1.0 Vol %				
Upper:	13.0 Vol %				
<ul style="list-style-type: none"> Vapor pressure at 20 °C (68 °F): 0.1 hPa 					
<ul style="list-style-type: none"> Density at 20 °C (68 °F): 1.1 g/cm³ (9.18 lbs/gal) Relative density: Not determined. Vapour density: Not determined. Evaporation rate: Not determined. 					
<ul style="list-style-type: none"> Solubility in / Miscibility with <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Water:</td> <td>Not miscible or difficult to mix.</td> </tr> </table> 		Water:	Not miscible or difficult to mix.		
Water:	Not miscible or difficult to mix.				
<ul style="list-style-type: none"> Partition coefficient (n-octanol/water): Not determined. 					
<ul style="list-style-type: none"> Viscosity: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Dynamic at 20 °C (68 °F):</td> <td>2100 mPas</td> </tr> <tr> <td>Kinematic:</td> <td>Not determined.</td> </tr> </table> 		Dynamic at 20 °C (68 °F):	2100 mPas	Kinematic:	Not determined.
Dynamic at 20 °C (68 °F):	2100 mPas				
Kinematic:	Not determined.				
<ul style="list-style-type: none"> Solvent content: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Organic solvents:</td> <td>60.7 %</td> </tr> </table> 		Organic solvents:	60.7 %		
Organic solvents:	60.7 %				
<ul style="list-style-type: none"> Solids content: 59.7 % 					
<ul style="list-style-type: none"> Other information: No further relevant information available. 					

10 Stability and reactivity

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

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

LD/LC50 values that are relevant for classification:		
122-99-6 2-Phenoxyethanol		
Oral	LD50	2740 mg/kg (rat)
84281-86-7 C. I. Solvent Violet 8		
Oral	LD50	700 mg/kg (rat)
- Primary irritant effect:
 - on the skin: Irritant to skin and mucous membranes.
 - on the eye: Strong irritant with the danger of severe eye injury.

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 The product shows the following dangers according to internally approved calculation methods for preparations:
 Harmful
 Irritant
- **Carcinogenic categories**

 • **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

 • **NTP (National Toxicology Program)**

None of the ingredients is listed.

 • **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

 • **Toxicity**

 • **Aquatic toxicity:**
107-41-5 2-methylpentane-2,4-diol

LC50 / 96h 8.510 mg/l (Fish)

6786-83-0 C. I. Solvent Blue 4: less than 0,1% Michler's Ketone

EC50 / 48h 0.025 mg/l (Daphnie)

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (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
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN3082
- **UN proper shipping name**
- **DOT** Environmentally hazardous substances, liquid, n.o.s. (C. I. Solvent Blue 4 < 0,1% Michler's Ketone)
- **ADR** 3082 Environmentally hazardous substances, liquid, n.o.s. (C. I. Solvent Blue 4 < 0,1% Michler's Ketone)
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C. I. Solvent Blue 4 < 0,1% Michler's Ketone), MARINE POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C. I. Solvent Blue 4 < 0,1% Michler's Ketone)

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· **Transport hazard class(es)**

· DOT, IMDG, IATA



· **Class** 9 Miscellaneous dangerous substances and articles
· **Label** 9

· **ADR**



· **Class** 9 (M6) Miscellaneous dangerous substances and articles
· **Label** 9

· **Packing group**

· DOT, ADR, IMDG, IATA III

· **Environmental hazards:** Product contains environmentally hazardous substances:
C. I. Solvent Blue 4 < 0,1% Michler's Ketone

· **Marine pollutant:** Yes
Symbol (fish and tree)

· **Special marking (ADR):** Symbol (fish and tree)

· **Special marking (IATA):** Symbol (fish and tree)

· **Special precautions for user** Warning: Miscellaneous dangerous substances and articles

· **Danger code (Kemler):** 90

· **EMS Number:** F-A,S-F

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· DOT

· **Quantity limitations** On passenger aircraft/rail: No limit

On cargo aircraft only: No limit

· **Remarks:** Special marking with the symbol (fish and tree).

· **ADR**

· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN3082, Environmentally hazardous substances, liquid, n.o.s. (C. I. Solvent Blue 4 < 0,1% Michler's Ketone), 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

• **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

• **DSL/NDSL (Canada)** All ingredients are listed

• **Carcinogenicity categories**

• **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

• **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

• **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**



GHS05

• **Signal word** Danger

• **Hazard-determining components of labeling:**

C. I. Solvent Violet 8
Phosphoric acid mono-bis-(2-ethylhexyl)-ester

• **Hazard statements**

Combustible liquid.
Causes skin irritation.
Causes serious eye damage.

• **Precautionary statements**

Keep away from flames and hot surfaces. - No smoking.
Wear protective gloves / eye protection / face protection.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If skin irritation occurs: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

• **Technical instructions (air):**

Class	Share in %
NK	50-100

• **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

• **Date of preparation / last revision** 12/10/2014 / 30

• **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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances

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Safety Data Sheet
acc. to OSHA HCS



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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
: Flammable liquids, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

- *** Data compared to the previous version altered.**

USA