



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/03/2017

Reviewed on 06/03/2017

## 1 Identification

· **Product identifier**

· **Trade name:** Agfa Dentus D-1000 1L

· **Application of the substance / the mixture** Developer for X-ray films

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Information department:**

Tel. +1 (800) 431-1785 Fax: +1 (800) 522-1545

e-mail: [customer.servicehkna@kulzer-dental.com](mailto:customer.servicehkna@kulzer-dental.com)

· **Emergency telephone number:**

Emergency CONTACT (24-Hour-Number)

GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

## 2 Hazard(s) identification

· **Classification of the substance or mixture**

Acute Tox. 4 H302 Harmful if swallowed.

Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 2 H351 Suspected of causing cancer.

· **Label elements**

· **GHS label elements**

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

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** Danger

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

1,4-dihydroxybenzene

potassium hydroxide

· **Hazard statements**

Harmful if swallowed.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)

USA



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 1)

IF exposed or concerned: Get medical advice/attention.

· **Classification system**

· **NFPA ratings for USA (scale 0-4)**



· **HMIS-Ratings (Scale 0-4)**



· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

· **Chemical characterization: Mixtures**

· **Description:** -

· **Dangerous components:**

|           |  |       |
|-----------|--|-------|
| 584-08-7  | potassium carbonate<br>Acute Tox. 3, H301; Eye Irrit. 2A, H319   | 5-10% |
| 123-31-9  | 1,4-dihydroxybenzene<br>Muta. 2, H341; Carc. 2, H351; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317 | 0-5%  |
| 111-46-6  | 2,2'-oxybisethanol<br>Acute Tox. 4, H302   | 0-5%  |
| 2654-57-1 | 4-methyl-1-phenyl-3-pyrazolidone<br>Acute Tox. 3, H301; Skin Sens. 1, H317                                     | < 1%  |

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

**4 First-aid measures**

· **Description of first aid measures**

· **After inhalation**

Supply fresh air.  
Seek medical treatment in case of complaints.

· **After skin contact** If skin irritation continues, consult a doctor.

· **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing**

Rinse out mouth and then drink plenty of water.  
Seek medical treatment.  
If symptoms persist consult doctor.

(Contd. on page 3)



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 2)

- **Information for 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**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.
- **Additional information -**

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Do not allow to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).  
Dispose contaminated material as waste according to item 13.  
Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- 

**7 Handling and storage**

- **Handling**
  - **Precautions for safe handling**  
Wear protective equipment. Keep unprotected persons away.  
Keep receptacles tightly sealed.  
Please observe the additional instructions in the product's instructions for use.
  - **Information about protection against explosions and fires:** The product is not flammable
- **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:**  
Do not store together with oxidizing and acidic materials.

(Contd. on page 4)



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 3)

- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **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:**

#### 123-31-9 1,4-dihydroxybenzene

|        |   |
|--------|---|
| PEL () | 2 mg/m <sup>3</sup>                                 |
| REL () | Short-term value: C 2* mg/m <sup>3</sup><br>*15-min |
| TLV () | 1 mg/m <sup>3</sup><br>SEN                          |

#### 111-46-6 2,2'-oxybisethanol

|         |                      |
|---------|----------------------|
| WEEL () | 10 mg/m <sup>3</sup> |
|---------|----------------------|

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

- **Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

Avoid contact with the eyes.  
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 eyes and skin.

- **Breathing equipment:** Filter A/P2.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

Check protective gloves prior to each use for their proper condition.  
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.

- **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.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR  
Nitrile rubber, NBR

(Contd. on page 5)

USA



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 4)

- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Light weight protective clothing

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Liquid
- **Color:** Colorless

- **Odor:** Odorless
- **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 11.4

· **Change in condition**

- **Melting point/Melting range:** <0 °C (<32 °F)
- **Boiling point/Boiling range:** >100 °C (>212 °F)

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:**

- **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

· **Density at 20 °C (68 °F):** 1.275 g/cm<sup>3</sup> (10.64 lbs/gal)

- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

- **Water:** Fully miscible

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

- **dynamic:** Not determined.
- **kinematic:** Not determined.

· **Other information** No further relevant information available.

**10 Stability and reactivity**

· **Reactivity** No further relevant information available.

(Contd. on page 6)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

- **Possibility of hazardous reactions** Reacts with strong acids and oxidizing agents
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** none

(Contd. of page 5)

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

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

**123-31-9 1,4-dihydroxybenzene**

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 320 mg/kg (rat) |
|------|------|-----------------|

**111-46-6 2,2'-oxybisethanol**

|      |      |                   |
|------|------|-------------------|
| Oral | LD50 | 12565 mg/kg (rat) |
|------|------|-------------------|

|        |      |                      |
|--------|------|----------------------|
| Dermal | LD50 | 11890 mg/kg (rabbit) |
|--------|------|----------------------|

- **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

- **Carcinogenic categories**

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

|          |                      |   |
|----------|----------------------|---|
| 123-31-9 | 1,4-dihydroxybenzene | 3 |
|----------|----------------------|---|

- **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:**

**123-31-9 1,4-dihydroxybenzene**

|          |                       |
|----------|-----------------------|
| LC50/96h | 0.11-0.64 mg/l (fish) |
|----------|-----------------------|

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Avoid transfer into the environment.  
Very toxic for aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

(Contd. on page 7)



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acc. to OSHA HCS

Printing date 06/03/2017

Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 6)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
  - **Recommendation**  
Disposal must be made according to official regulations.  
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, IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)  
· **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)  
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone), MARINE POLLUTANT
- **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

(Contd. on page 8)



**Safety Data Sheet**  
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Reviewed on 06/03/2017

**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 7)

|   |   |
|---|---|
| · <b>Packing group</b><br>· DOT, ADR, IMDG, IATA  | III   |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>                                   | Product contains environmentally hazardous substances:<br>hydroquinone<br>Yes       |
| · <b>Special marking (ADR):</b><br>· <b>Special marking (IATA):</b>                             | Symbol (fish and tree)<br>Symbol (fish and tree)<br>Symbol (fish and tree)          |
| · <b>Special precautions for user</b><br>· <b>Danger code (Kemler):</b><br>· <b>EMS Number:</b> | Warning: Miscellaneous dangerous substances and articles<br>90<br>F-A,S-F           |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>                | Not applicable.   |
| · <b>Transport/Additional information:</b><br>· DOT<br>· <b>Remarks:</b>                        | -<br>Special marking with the symbol (fish and tree).                               |
| · <b>UN "Model Regulation":</b>   | UN3082, Environmentally hazardous substances, liquid, n.o.s. (hydroquinone), 9, III |

**15 Regulatory information**

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

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

123-31-9 | 1,4-dihydroxybenzene

· **TSCA (Toxic Substances Control Act)** Medical devices are exempted from TSCA.

· **Carcinogenicity categories**

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

123-31-9 | 1,4-dihydroxybenzene

A3

· **GHS label elements**

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

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** Danger

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

1,4-dihydroxybenzene  
potassium hydroxide

(Contd. on page 9)



**Safety Data Sheet**  
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**Trade name: Agfa Dentus D-1000 1L**

(Contd. of page 8)

· **Hazard statements**

*Harmful if swallowed.  
Causes serious eye damage.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
Suspected of causing cancer.*

· **Precautionary statements**

*Wear protective gloves/protective clothing/eye protection/face protection.  
Avoid release to the environment.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice/attention.*

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

**16 Other information**

*These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Relevant phrases**

*H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.*

· **Date of preparation / last revision** 06/03/2017 / 2

· **Abbreviations and acronyms:**

*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  
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  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Acute Tox. 3: Acute toxicity – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Skin Sens. 1: Skin sensitisation – Category 1  
Muta. 2: Germ cell mutagenicity – Category 2  
Carc. 2: Carcinogenicity – Category 2*

· **\* Data compared to the previous version altered.**