

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/09/2019

Reviewed on 10/09/2019

## 1 Identification

- **Product identifier**
- **Trade name:** *Bifluorid 5*
- **Application of the substance / the mixture** *Dental varnish*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*VOCO GmbH*  
*Anton-Flettner-Str. 1-3*  
*D-27472 Cuxhaven*
- **Information department:** *Scientific department tel. +49 (0)4721-719-0*
- **Emergency telephone number:** *Scientific department tel. +49 (0)4721-719-0*

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



*Flame*

*Flam. Liq. 2 H225 Highly flammable liquid and vapor.*



*Eye Irrit. 2A H319 Causes serious eye irritation.*

*STOT SE 3 H336 May cause drowsiness or dizziness.*

- **Additional information:**

*Health effects are based on the unmixed/uncured material.*

*Under FDA regulations this product is classified as a medical device.*

*Medical devices are exempt from the labelling provisions of GHS according to the Hazard Communication Standard (HCS).*

- 
- **Label elements**

- **Hazard pictograms** *GHS02, GHS07*

- **Signal word** *Danger*

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

*ethyl acetate*

- **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes serious eye irritation.*

*May cause drowsiness or dizziness.*

- **Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

*Wear protective gloves / eye protection.*

*Wear protective clothing.*

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

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Other hazards**

*Material should only be used with extreme caution in individuals who may have control over their swallowing reflex (e.g. pre-school children and the disabled).*

- **Results of PBT and vPvB assessment**

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

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

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## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

|           |                                |                                                                |         |
|-----------|--------------------------------|----------------------------------------------------------------|---------|
| 141-78-6  | ethyl acetate                  | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319; STOT SE 3, H336     | 50-100% |
| 9004-70-0 | Cellulose nitrate with alcohol | Flam. Liq. 1, H224<br>Eye Irrit. 2A, H319                      | 10-25%  |
| 105-68-0  | isopentyl propionate           | Flam. Liq. 3, H226                                             | 10-25%  |
|           | Clove oil                      | Acute Tox. 3, H301<br>Asp. Tox. 1, H304<br>Eye Irrit. 2A, H319 | ≤ 2,5%  |

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Swallowing of larger amounts can lead to nausea, vomiting and/or diarrhoea.  
If symptoms persist consult doctor.
- **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>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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 equipment. Keep unprotected persons away.
- **Environmental precautions:** 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).  
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.

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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
For dental use only.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **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:**  
See storage instructions on package  
Keep receptacle tightly sealed.
- **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:**  
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 that were valid during the creation were used as basis.
  - **Exposure controls**
  - **Personal protective equipment:**
  - **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Avoid contact with the eyes.
  - **Breathing equipment:** Not required.
  - **Protection of hands:**
- 

Protective gloves
- **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.
  - **Eye protection:** Safety glasses

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

|        |            |
|--------|------------|
| Form:  | Fluid      |
| Color: | Whitish    |
| Odor:  | Fruit-like |
- **pH-value:** Not determined.
- **Change in condition**

|                              |               |
|------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
|------------------------------|---------------|

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|                                                   |                                                                                            |
|---------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Boiling point/Boiling range:</b> Undetermined. |                                                                                            |
| · <b>Flash point:</b>                             | < 10 °C (< 50 °F)                                                                          |
| · <b>Auto igniting:</b>                           | Product is not selfigniting.                                                               |
| · <b>Danger of explosion:</b>                     | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>Density at 20 °C (68 °F):</b>                | 0.95 g/cm <sup>3</sup> (7.928 lbs/gal)                                                     |
| · <b>Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix.                                                          |
| · <b>Viscosity:</b>                               |                                                                                            |
| <b>Dynamic:</b>                                   | Not determined.                                                                            |
| <b>Kinematic:</b>                                 | Not determined.                                                                            |
| · <b>Other information</b>                        | No further relevant information available.                                                 |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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:**

|                               |          |                     |
|-------------------------------|----------|---------------------|
| Oral                          | LD50     | 5800 mg/kg (mouse)  |
| <b>141-78-6 ethyl acetate</b> |          |                     |
| Oral                          | LD50     | 5620 mg/kg (rabbit) |
| Inhalative                    | LC50/4 h | 1600 mg/l (rat)     |

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use

|           |                  |   |
|-----------|------------------|---|
|           | fumed silica     | 3 |
| 7789-75-5 | calcium fluoride | 3 |
| 7681-49-4 | sodium fluoride  | 3 |

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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### · OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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

- |                                                                                     |                                                                             |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| · <b>UN-Number</b>                                                                  |                                                                             |
| · <b>DOT, ADR, IMDG, IATA</b>                                                       | UN1993                                                                      |
| · <b>UN proper shipping name</b>                                                    |                                                                             |
| · <b>DOT</b>                                                                        | Flammable liquids, n.o.s. (Ethyl acetate, Nitrocellulose with alcohol)      |
| · <b>ADR</b>                                                                        | 1993 Flammable liquids, n.o.s. (Ethyl acetate, Nitrocellulose with alcohol) |
| · <b>IMDG</b>                                                                       | FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL)       |
| · <b>IATA</b>                                                                       | Flammable liquid, n.o.s. (Ethyl acetate, Nitrocellulose with alcohol)       |
| · <b>Transport hazard class(es)</b>                                                 |                                                                             |
| · <b>DOT</b>                                                                        |                                                                             |
|  |                                                                             |
| · <b>Class</b>                                                                      | 3 Flammable liquids                                                         |

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· Label 3

· ADR, IMDG, IATA



· Class 3 Flammable liquids

· Label 3

· Packing group

· DOT, ADR, IMDG, IATA II

· Environmental hazards:

· Marine pollutant: No

· Special precautions for user Warning: Flammable liquids

· Danger code (Kemler): 33

· EMS Number: F-E, S-E

· Stowage Category B

· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

· UN "Model Regulation": UN 1993 FLAMMABLE LIQUIDS, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL), 3, II

## 15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

Contact Voco for more information

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients are listed

· TLV (Threshold Limit Value established by ACGIH)

7789-75-5 calcium fluoride

A4

7681-49-4 sodium fluoride

A4

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

None of the ingredients are listed

· **GHS label elements**

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

· **Hazard pictograms** GHS02, GHS07· **Signal word** Danger· **Hazard statements**

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Wear protective gloves / eye protection.

Wear protective clothing.

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

Continue rinsing.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Dispose of contents/container in accordance with local/regional/national/international regulations.

\*

## 16 Other information

· **Department issuing SDS:** Scientific department· **Contact:** Tel.: +49 (0)4721-719-0· **Date of preparation / last revision:** 10/09/2019 / 7· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 1: Flammable liquids, Hazard Category 1

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 3: Acute toxicity, Hazard Category 3

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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

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