

SAFETY DATA SHEETS

This SDS packet was issued with item:

077109440

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

0273000007 0273000008 070829424 070829432 071245075 071245083 071245091 071317957 071317965 071317973
077109507 077109515 077109523 077109531 077109549 077109564 077109572 077109580 077109598 077109606
077109655 077109663 077109671 077109689 077109697 077109754 077109762 077109770 077109788

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

077111164 077111172 077111180 077111198

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/30/2010

Reviewed on 08/30/2010

1 Identification of substance

- **Product details**
- **Trade name:** Profluorid L
- **Application of the substance / the preparation** Dental varnish
- **Manufacturer/Supplier:**
VOCO GmbH
Anton-Flettner-Str. 1-3
D-27472 Cuxhaven
- **Information department:** Scientific department tel. +49 (0)4721-719-0
- **Emergency information:** Scientific department tel. +49 (0)4721-719-0



2 Composition/Data on components

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

· Dangerous components:

141-78-6	ethyl acetate	50-100%
9004-70-0	Cellulose nitrate with alcohol	10-25%
105-68-0	isopentyl propionate	10-25%
7681-49-4	sodium fluoride	2.5-5%
	Clove oil	≤ 2.5%

3 Hazards identification

- **Hazard description:**
Highly flammable
- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.
Highly flammable.
Contact with acids liberates toxic gas.
Vapours may cause drowsiness and dizziness.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 3
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 3
Reactivity = 0
- **Additional information:**
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).

4 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.

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Trade name: Profluorid L

If symptoms persist consult doctor.

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5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
For dental use only.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **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.

8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:**

141-78-6 ethyl acetate

PEL 1400 mg/m³, 400 ppmREL 1400 mg/m³, 400 ppmTLV 1440 mg/m³, 400 ppm

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

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

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Trade name: Profluorid L

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- 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: Safety glasses

9 Physical and chemical properties

- General Information

Form:	Fluid
Color:	Whitish
Odor:	Characteristic

- Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- Flash point: < 10°C (< 50°F)

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Density at 20°C (68°F): 1.01 g/cm³

- Solubility in / Miscibility with Water: Not miscible or difficult to mix.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

- Dangerous reactions No dangerous reactions known.

- Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

Oral	LD50	5800 mg/kg (mouse)
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141-78-6 ethyl acetate

Oral	LD50	5620 mg/kg (rabbit)
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Inhalative	LC50/4 h	1600 mg/l (rat)
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7681-49-4 sodium fluoride

Oral	LD50	52 mg/kg (rat)
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- Primary irritant effect:

- on the skin: No irritant effect.

- on the eye: Irritating effect.

- Sensitization: No sensitizing effects known.

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Trade name: Profluorid L

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Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information

Additional ecological information:

General notes:

Water hazard class I (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.

13 Disposal considerations

Product:

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

DOT regulations:



Hazard class: 3

Identification number: UN1993

Packing group: II

Proper shipping name (technical name): FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL)

Label: 3

Land transport ADR/RID (cross-border):



ADR/RID class: 3 Flammable liquids

Danger code (Kemler): 33

UN-Number: 1993

Packaging group: II

Label: 3

Description of goods: 1993 FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL)

Maritime transport IMDG:



IMDG Class: 3

UN Number: 1993

Label: 3

Packaging group: II

EMS Number: F-E-S-E

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Trade name: Profluorid L

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· Marine pollutant: No
 · Proper shipping name: FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL)

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 3
 · UN/ID Number: 1993
 · Label: 3
 · Packaging group: II
 · Proper shipping name: FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, NITROCELLULOSE WITH ALCOHOL)

15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

Contact Voco for more informations

141-78-6 ethyl acetate

· 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.

· 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.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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Trade name: Profluorid L

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· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

Contact Voco for more informations

· **Canadian Ingredient Disclosure list (limit 0.1%)**

Contact Voco for more informations

· **Canadian Ingredient Disclosure list (limit 1%)**

Contact Voco for more informations

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Highly flammable

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

sodium fluoride

· **Risk phrases:**

Highly flammable.

Contact with acids liberates toxic gas.

Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

Do not breathe fumes/aerosol.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

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.

· **Department issuing MSDS:** Scientific departement

· **Contact:** Tel.: +49 (0)4721-719-0

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014



Printing date 12/03/2012

Reviewed on 12/03/2012

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** VOCO Profluorid Varnish
- **Relevant identified uses of the substance or mixture and uses advised against** Non-dental use.
- **Application of the substance / the preparation** 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 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
.....
Flammable. Contact with acids liberates toxic gas.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Labelling according to EU guidelines:**
- **Safety phrases:**
Keep container tightly closed.
Keep away from sources of ignition - No smoking.
Do not breathe vapour/spray.
Wear suitable protective clothing.
In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
- **NFPA ratings (scale 0 - 4)**

 Health = 0
Fire = 3
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

 Health = 0
Fire = 3
Reactivity = 0
- **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).
Use only for intended scope of application

3 Composition/information on ingredients

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

64-17-5	ethanol	10-25%
7681-49-4	sodium fluoride	2.5-5%

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Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 12/03/2012

Reviewed on 12/03/2012

Trade name: **VOCO Profluorid Varnish**

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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:** 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.

- **After swallowing:**

Swallowing of larger amounts can lead to nausea, vomiting and/or diarrhoea.

Immediately call a doctor.

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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:** Pick up mechanically.

- **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

- **Handling:**

- **Precautions for safe handling** For dental use only.

- **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:** Do not store together with acids.

- **Further information about storage conditions:**

See storage instructions on package

Keep receptacle tightly sealed.

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.

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Reviewed on 12/03/2012

Trade name: **VOCO Profluorid Varnish**

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Material of gloves:** Not required.
- **Penetration time of glove material:** Not applicable.

9 Physical and chemical properties

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

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

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** 36°C (97 °F)
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20°C (68 °F):** 1.02 g/cm³ (8.512 lbs/gal)
- **Solubility in / Miscibility with**

Water:	Not miscible or difficult to mix.
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:** Contact with acids releases toxic gases.
- **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:**

7681-49-4 sodium fluoride	
Oral	LD50 52 mg/kg (rat)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

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Trade name: **VOCO Profluorid Varnish**

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· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

· **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.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Water hazard class 1 (Self-assessment): slightly hazardous for water

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** UN1170

· **UN proper shipping name**

· **DOT, IATA** ETHANOL SOLUTION

· **ADR** 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

· **IMDG** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids.

· **Label** 3

· **ADR, IMDG, IATA**



· **Class** 3 Flammable liquids

· **Label** 3

· **DOT, ADR, IMDG, IATA** II

· **Marine pollutant:** No

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acc. to ISO/DIS 11014

Printing date 12/03/2012

Reviewed on 12/03/2012

Trade name: **VOCO Profluorid Varnish**

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- **Danger code (Kemler):** 33
- **EMS Number:** F-E,S-E

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

- **Carcinogenity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed

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

7681-49-4 sodium fluoride

A4

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

None of the ingredients are listed

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

None of the ingredients are listed

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

Contact VOCO for more information.

- **Canadian Ingredient Disclosure list (limit 1%)**

7681-49-4 sodium fluoride

- **Product related hazard informations:**

- **Hazard-determining components of labelling:**

sodium fluoride

- **Risk phrases:**

Flammable.

Contact with acids liberates toxic gas.

- **Safety phrases:**

Keep container tightly closed.

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Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 12/03/2012

Reviewed on 12/03/2012

Trade name: VOCO Profluorid Varnish

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*Keep away from sources of ignition - No smoking.**Do not breathe vapour/spray.**Wear suitable protective clothing.**In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.***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.

· **Department issuing MSDS:** Scientific department

· **Contact:** Tel.: +49 (0)4721-719-0

—USA—

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2015

Reviewed on 05/08/2015

1 Identification

- **Product identifier**
- **Trade name:** *VOCO Profluorid Varnish*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **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

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).

- **Classification of the substance or mixture**



Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**
- **Hazard pictograms** *GHS02, GHS07*
- **Signal word** *Warning*
- **Hazard statements**
Flammable liquid and vapour.
Harmful if swallowed.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Wear protective gloves / eye protection.
Wear protective clothing.
Avoid breathing vapours.
IF SWALLOWED: Call a doctor if you feel unwell.
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).
Use only for intended scope of application
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

3 Composition/information on ingredients

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

- **Dangerous components:**

64-17-5	ethanol	10-25%
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(Contd. on page 2)

USA

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Reviewed on 05/08/2015

Trade name: **VOCO Profluorid Varnish**

7681-49-4 sodium fluoride

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2,5-5%

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.
- **After swallowing:**
Swallowing of larger amounts can lead to nausea, vomiting and or diarrhoea.
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** No further relevant information available.

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:** Pick up mechanically.
- **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** For dental use only.
- **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:** Do not store together with acids.
- **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.

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USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2015

Reviewed on 05/08/2015

Trade name: **VOCO Profluorid Varnish**

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Control parameters

Components with limit values that require monitoring at the workplace:

64-17-5 ethanol (10-25%)

PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 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:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

Material of gloves: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Fruit-like

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: 36 °C (97 °F)

Auto igniting: Product is not selfigniting.

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

Density at 20 °C (68 °F): 1.02 g·cm³ (8.512 lbs/gal)

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

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: Contact with acids releases toxic gases.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

USA

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05.08.2015

Reviewed on 05.08.2015

Trade name: *VOCO Profluorid Varnish*

(Contd. of page 3)

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

7681-49-4 sodium fluoride

Oral LD50 52 mg/kg (rat)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

The component 64-17-5 Ethanol is listed by IARC as Group 1 but in alcoholic beverages consumption only. This product is not an alcoholic beverage.

	fumed silica	
7681-49-4	sodium fluoride	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: No further relevant information available.

Persistence and degradability: No further relevant information available.

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.

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Safety Data Sheet

acc. to OSHA HCS


Printing date 05/08/2015

Reviewed on 05/08/2015

Trade name: *VOCO Profluorid Varnish*

(Contd. of page 4)

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1170
· UN proper shipping name	
· DOT	Ethanol
· ADR	1170 Ethanol (Ethyl alcohol)
· IMDG	ETHANOL (ETHYL ALCOHOL)
· IATA	ETHANOL
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1170, Ethanol (Ethyl alcohol), 3, 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 ingredients are listed.
· Section 313 (Specific toxic chemical listings):	
	None of the ingredients are listed.
· TSCA (Toxic Substances Control Act):	
	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.

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Reviewed on 05/08/2015

Trade name: **VOCO Profluorid Varnish**

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

None of the ingredients are listed

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

64-17-5 ethanol

• **Carcinogenicity categories**

• **EPA (Environmental Protection Agency)**

None of the ingredients are listed

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

64-17-5 ethanol

A3

7681-49-4 sodium fluoride

A4

• **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** Warning

• **Hazard statements**

Flammable liquid and vapour.

Harmful if swallowed.

• **Precautionary statements**

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

Wear protective gloves/eye protection.

Wear protective clothing.

Avoid breathing vapours.

IF SWALLOWED: Call a doctor if you feel unwell.

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

16 Other information

The information contained herein is based on our present knowledge and is believed to be correct at the date issued. The information is subject to change without notice. However, all information, statements, recommendations or suggestions shall not constitute any guarantee, representation or warranty, expressed or implied.

Final determination whether the product is fit and suitable for a particular purpose and the user's method of use or application is the sole responsibility of the user.

• **Department issuing MSDS:** Scientific department

• **Contact:** Tel.: +49 (0)4721-719-0

• **Date of preparation / last revision** 05/08/2015 22

• **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

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

Acute Tox. 4: Acute toxicity, Hazard Category 4

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/11/2015

Reviewed on 05/11/2015

1 Identification

- **Product identifier**
- **Trade name:** Profluorid L
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **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

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).

- **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.

- **Label elements**

- **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.

- **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).

Use only for intended scope of application

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/11/2015

Reviewed on 05/11/2015

(Contd. of page 1)

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	50-100%
9004-70-0	Cellulose nitrate with alcohol	10-25%
105-68-0	isopentyl propionate	10-25%
7681-49-4	sodium fluoride	2.5-5%
	Clove oil	≤ 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.
- **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, 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.
Do not flush with water or aqueous cleansing agents
- **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**
For dental use only.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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- **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:	Characteristic
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** < 10 °C (< 50 °F)
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Density at 20 °C (68 °F):** 1.01 g/cm³ (8.428 lbs/gal)

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(Contd. of page 3)

- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **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:**

Oral	LD50	5800 mg/kg (mouse)
141-78-6 ethyl acetate		
Oral	LD50	5620 mg/kg (rabbit)
Inhalative	LC50/4 h	1600 mg/l (rat)
7681-49-4 sodium fluoride		
Oral	LD50	52 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:**
Testing according to ISO 10993-1/10993-10 showed no skin irritation for this product when fully cured
No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

· **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:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.

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Reviewed on 05/11/2015



(Contd. of page 4)

- **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

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

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- | | |
|--|---|
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | UN1993, 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

· **Carcinogenicity 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

· **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.

USA

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acc. to OSHA HCS

Printing date 05/11/2015

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16 Other information

The information contained herein is based on our present knowledge and is believed to be correct at the date issued. The information is subject to change without notice. However, all information, statements, recommendations or suggestions shall not constitute any guarantee, representation or warranty, expressed or implied.

Final determination whether the product is fit and suitable for a particular purpose and the user's method of use or application is the sole responsibility of the user.

· **Department issuing MSDS:** Scientific department

· **Contact:** Tel.: +49 (0)4721-719-0

· **Date of preparation / last revision** 05/11/2015 / 6

· **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

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

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

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

USA