

SAFETY DATA SHEETS

This SDS packet was issued with item:

070407650

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

077061922

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).

070407668 070407684 077061963

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/06/2009

Reviewed on 04/06/2009

1 Identification of substance

- **Product details**
- **Trade name:** Ufi Gel hard C base
- **Application of the substance / the preparation:** Direct hard relining material
- **Manufacturer/Supplier:**
Voco GmbH
Anton-Flettner-Str. 1-3
D-27472 Cuxhaven
- **Information department:** Scientific department
- **Emergency information:** Scientific department tel. +49 (0) 4721 7190

2 Composition/Data on components

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

- **Dangerous components:**

1565-94-2	BIS-GMA	10-25%
6606-59-3	HEDMA	5-10%
72869-86-4	Urethanedimethacrylate	5-10%

3 Hazards identification

- **Hazard description:**
Irritant
- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.
Irritating to eyes and skin.
- **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 = 1
Fire = 0
Reactivity = 0

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



Health = 1
Fire = 0
Reactivity = 0

4 First aid measures

- **After inhalation:** Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

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Trade name: Ufi Gel hard C base

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6 Accidental release measures

- *Person-related safety precautions: Not required.*
- *Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.*
- *Measures for cleaning/collecting: Pick up mechanically.*

7 Handling and storage

- **Handling:**
- *Information for safe handling: For dental use only.*
- *Information about protection against explosions and fires: No special measures required.*
- **Storage:**
- *Requirements to be met by storerooms and receptacles: No special requirements.*
- *See storage instructions on package*
- *Information about storage in one common storage facility: Not required.*
- *Further information about storage conditions: 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:**
- *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.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
- *Immediately remove all soiled and contaminated clothing.*
- *Wash hands before breaks and at the end of work.*
- *Avoid contact with the eyes and skin.*
- **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.*
- **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:	Pasty
Color:	Light red
Odor:	Characteristic

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Trade name: Ufi Gel hard C base

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- **Change in condition**
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
- **Flash point:** *Not applicable.*
- **Auto igniting:** *Product is not selfigniting.*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Density:** *Not determined.*
- **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:**
- **Primary irritant effect:**
on the skin: Irritant to skin and mucous membranes.
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:
Irritant

12 Ecological information

- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Harmful to aquatic organisms

13 Disposal considerations

- **Product:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

- **DOT regulations:**
- **Hazard class:** -

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Trade name: Ufi Gel hard C base

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· Land transport ADR/RID (cross-border):

· ADR/RID class: -

· Maritime transport IMDG:

· IMDG Class: -

· Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class: -

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):

1565-94-2 | BIS-GMA

· 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:

Contact Voco for more informations

· Cancerogenity categories

· EPA (Environmental Protection Agency)

Contact Voco for more information

· IARC (International Agency for Research on Cancer)

Contact Voco for more information

· NTP (National Toxicology Program)

Contact Voco for more informations

· TLV (Threshold Limit Value established by ACGIH)

Contact Voco for more Information

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

Contact Voco for more information

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· 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

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Material Safety Data Sheet
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Trade name: Ufi Gel hard C base

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· **Product related hazard informations:**

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

· **Hazard symbols:**



Irritant

· **Risk phrases:**

Irritating to eyes and skin.

· **Safety phrases:**

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

After contact with skin, wash immediately with plenty of soap and water.

Wear suitable protective clothing and gloves.

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 7190

-USA-

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/06/2009

Reviewed on 04/06/2009

1 Identification of substance

- **Product details**
- **Trade name:** Ufi Gel hard C catalyst
- **Application of the substance / the preparation:** Direct hard relining material
- **Manufacturer/Supplier:**
Voco GmbH
Anton-Flettner-Str. 1-3
D-27472 Cuxhaven
- **Information department:** Scientific department
- **Emergency information:** Scientific department tel. +49 (0) 4721 7190

2 Composition/Data on components

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

- **Dangerous components:**

1565-94-2	BIS-GMA	10-25%
6606-59-3	HEDMA	5-10%
72869-86-4	Urethanedimethacrylate	5-10%

3 Hazards identification

- **Hazard description:**
Irritant
- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.
Irritating to eyes and skin.
- **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 = 1
Fire = 0
Reactivity = 0

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



HEALTH 1 Health = 1
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0

4 First aid measures

- **After inhalation:** Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

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Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/06/2009

Reviewed on 04/06/2009

Trade name: Ufi Gel hard C catalyst

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6 Accidental release measures

- *Person-related safety precautions:* Not required.
- *Measures for environmental protection:* Do not allow to enter sewers/ surface or ground water.
- *Measures for cleaning/collecting:* Pick up mechanically.

7 Handling and storage

- *Handling:*
 - *Information for safe handling:* For dental use only.
 - *Information about protection against explosions and fires:* No special measures required.
- *Storage:*
 - *Requirements to be met by storerooms and receptacles:* See storage instructions on package
 - *Information about storage in one common storage facility:* Not required.
 - *Further information about storage conditions:* 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:*
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.
- *Personal protective equipment:*
 - *General protective and hygienic measures:* Avoid contact with the eyes and skin.
 - *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.
- *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

<i>Form:</i>	Pasty
<i>Color:</i>	Colorless
<i>Odor:</i>	Characteristic

· Change in condition

<i>Melting point/Melting range:</i>	Undetermined.
<i>Boiling point/Boiling range:</i>	Undetermined.

· *Flash point:* Not applicable.

· *Auto igniting:* Product is not selfigniting.

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Material Safety Data Sheet

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Printing date 04/06/2009

Reviewed on 04/06/2009

Trade name: Ufi Gel hard C catalyst

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

· **Density:** Not determined.

· **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:**

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **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:

Irritant

12 Ecological information

· **General notes:**

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

Do not allow product to reach ground water, water course or sewage system.

Harmful to aquatic organisms

13 Disposal considerations

· **Product:**

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

· **Uncleaned packagings:**

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

14 Transport information

· **Land transport ADR/RID (cross-border):**

· **ADR/RID class:** -

· **Maritime transport IMDG:**

· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -

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Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/06/2009

Reviewed on 04/06/2009

Trade name: Ufi Gel hard C catalyst

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15 Regulations

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

None of the ingredients is listed.

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

benzoyl peroxyde

· *TSCA (Toxic Substances Control Act):*

1565-94-2 | BIS-GMA

· *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:*

Contact Voco for more informations

· *Cancerogenity categories*· *EPA (Environmental Protection Agency)*

Contact Voco for more information

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

Contact Voco for more information

· *NTP (National Toxicology Program)*

Contact Voco for more informations

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

Contact Voco for more Information

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

Contact Voco for more information

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

None of the ingredients is listed.

· *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:*

Irritant

· *Risk phrases:*

Irritating to eyes and skin.

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Material Safety Data Sheet
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Printing date 04/06/2009

Reviewed on 04/06/2009

Trade name: Ufi Gel hard C catalyst

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Safety phrases:

*In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
After contact with skin, wash immediately with plenty of soap and water.
Wear suitable protective clothing and gloves.*

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 7190

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

1 Identification of substance

- **Product details**
- **Trade name:** *Ufi Gel hard C adhesive*
- **Application of the substance / the preparation** *Adhesive*
- **Manufacturer/Supplier:**
Voco GmbH
Anton-Flettner-Str. 1-3
D-27472 Cuxhaven
- **Information department:** *Scientific department*
- **Emergency information:** *Scientific department tel. +49 (0) 4721 7190*

2 Composition/Data on components

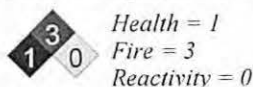
- **Chemical characterization**
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*

- **Dangerous components:**

67-64-1	acetone	50-100%
868-77-9	2-hydroxyethyl methacrylate	2.5-5%

3 Hazards identification

- **Hazard description:**
Irritant
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.
Irritating to eyes.
May cause sensitization by skin contact.
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)**



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



4 First aid measures

- **After inhalation:** *Seek medical treatment in case of complaints.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** *If symptoms persist consult doctor.*

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*

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USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

Trade name: Ufi Gel hard C adhesive

(Contd. of page 1)

· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.
- **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.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** See storage instructions on package
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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:**

67-64-1 acetone

PEL	2400 mg/m ³ , 1000 ppm
REL	590 mg/m ³ , 250 ppm
TLV	Short-term value: 1782 mg/m ³ , 750 ppm Long-term value: 1188 mg/m ³ , 500 ppm
BEI	

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

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **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.
- **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.

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USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

Trade name: Ufi Gel hard C adhesive

· Eye protection: Safety glasses

(Contd. of page 2)

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	Colorless
Odor:	Characteristic

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

· Flash point: -19°C (-2°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): 0.8 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:

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 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:

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

Irritant

12 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.

USA

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

Trade name: Ufi Gel hard C adhesive

(Contd. of page 3)

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:** UN1090
- **Packing group:** II
- **Proper shipping name (technical name):** ACETONE, mixture
- **Label:** 3

· Land transport ADR/RID (cross-border):



- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1090
- **Packaging group:** II
- **Label:** 3
- **Description of goods:** 1090 ACETONE, mixture

· Maritime transport IMDG:



- **IMDG Class:** 3
- **UN Number:** 1090
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Propper shipping name:** ACETONE, mixture

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1090
- **Label:** 3
- **Packaging group:** II
- **Propper shipping name:** ACETONE, mixture

USA

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

Trade name: Ufi Gel hard C adhesive

(Contd. of page 4)

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):*

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.

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

None of the ingredients is listed.

- *Chemicals known to cause developmental toxicity:*

Contact Voco for more informations

- *Carcinogenity categories*

- *EPA (Environmental Protection Agency)*

Contact Voco for more information

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

Contact Voco for more information

- *NTP (National Toxicology Program)*

Contact Voco for more informations

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

Contact Voco for more Information

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

Contact Voco for more information

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

None of the ingredients is listed.

- *Canadian substance listings:*

- *Canadian Domestic Substances List (DSL)*

All ingredients are listed.

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

Contact Voco for more informations

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

All ingredients are listed.

- *Product related hazard informations:*

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

- *Hazard symbols:*



Irritant
Highly flammable

- *Hazard-determining components of labelling:*

2-hydroxyethyl methacrylate

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USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/18/2009

Reviewed on 03/18/2009

Trade name: Ufi Gel hard C adhesive

(Contd. of page 5)

Risk phrases:

Highly flammable.
Irritating to eyes.
May cause sensitization by skin contact.
Vapours may cause drowsiness and dizziness.

Safety phrases:

Keep away from sources of ignition - No smoking.
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
After contact with skin, wash immediately with plenty of soap and water.
Wear suitable gloves.
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 7190

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

1 Identification

- **Product identifier**
- **Trade name:** *Ufi Gel hard C base*
- **Application of the substance / the mixture** *Direct hard relining material*
- **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**



*Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
.....
Eye Irrit. 2B H320 Causes eye irritation.*

- **Label elements**
- **Hazard pictograms** *GHS07*
- **Signal word** *Warning*
- **Hazard statements**
*Causes skin and eye irritation.
May cause an allergic skin reaction.*
- **Precautionary statements**
*Wear protective gloves/protective clothing/eye protection/face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards**
*Use only for intended scope of application
None*
- **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:**

<i>1565-94-2</i>	<i>BIS GMA</i>	<i>10-25%</i>
	<i>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317</i>	

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C base

6606-59-3

1,6-hexanediylbismethacrylate

(Contd. of page 1)

5-10%

Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** 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:** Use fire fighting measures that suit the environment.
- **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** Not required.
- **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:** 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:** See storage instructions on package
- **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.

(Contd. on page 3)

US

Safety Data Sheet


acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C base

(Contd. of page 2)

- **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:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
 - **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:	Pasty
Color:	Light red
Odor:	Characteristic
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** Not applicable.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined.
- **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** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C base

(Contd. of page 3)

- **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:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

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

	PMMA	3
128-37-0	2,6-di-tert-butyl-p-cresol	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.
- **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.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C base

(Contd. of page 4)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Class	Void
· Packing group	Void
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

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.

· **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)**

Contact VOCO for more information.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C base

(Contd. of page 5)

· **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** GHS07

· **Signal word** Warning

· **Hazard statements**

Causes skin and eye irritation.

May cause an allergic skin reaction.

· **Precautionary statements**

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

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

Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

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 SDS:** Scientific department

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

· **Date of preparation / last revision:** 10/21/2019 / 5

· **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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

1 Identification

- **Product identifier**
- **Trade name:** *Ufi Gel hard C catalyst*
- **Application of the substance / the mixture** *Direct hard relining material*
- **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**



*Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Eye Irrit. 2B H320 Causes eye irritation.*

- **Label elements**
- **Hazard pictograms** *GHS07*
- **Signal word** *Warning*
- **Hazard statements**
*Causes skin and eye irritation.
May cause an allergic skin reaction.*
- **Precautionary statements**
*Wear protective gloves/protective clothing/eye protection/face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards** *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:**

1565-94-2	BIS GMA <i>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317</i>	10-25%
6606-59-3	1,6-hexanediylobismethacrylate <i>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</i>	5-10%

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US

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C catalyst

(Contd. of page 1)

	benzoyl peroxyde	≤ 2.5%
	Org. Perox. B, H241 Eye Irrit. 2A, H319; Skin Sens. 1, H317	

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** 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:** Use fire fighting measures that suit the environment.
- **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** Not required.
- **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:** 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:** See storage instructions on package
- **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.

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C catalyst

(Contd. of page 2)

- **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:** Avoid contact with the eyes and skin.
- **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:	Pasty
Color:	Colorless
Odor:	Characteristic
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** Not applicable.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined.
- **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** 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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C catalyst

(Contd. of page 3)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:** Sensitization possible through skin contact.· **Additional toxicological information:**

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

Irritant

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

	PMMA	3
	benzoyl peroxyde	3
128-37-0	2,6-di-tert-butyl-p-cresol	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.· **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 product 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:** Disposal must be made according to official regulations.· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.

-US-

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C catalyst

(Contd. of page 4)

14 Transport information

· UN-Number	Void
· ADR, IATA	Void
· UN proper shipping name	Void
· ADR, IATA	Void
· Transport hazard class(es)	Void
· ADR, IATA	Void
· Class	Void
· Packing group	Void
· ADR, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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):

benzoyl peroxyde

· 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

· 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)

Contact VOCO for more information.

· 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 GHS07

· Signal word Warning

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C catalyst

(Contd. of page 5)

· **Hazard statements**

Causes skin and eye irritation.
May cause an allergic skin reaction.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
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 SDS:** Scientific department

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

· **Date of preparation / last revision:** 10/21/2019 / 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)

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Org. Perox. B: Organic peroxides – Type B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

1 Identification

- **Product identifier**
- **Trade name:** *Ufi Gel hard C adhesive*
- **Application of the substance / the mixture** *Adhesive*
- **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.

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

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 an allergic skin reaction.

May cause drowsiness or dizziness.

- **Precautionary statements**

Keep away from open flames. - No smoking.

Avoid breathing vapours.

Wear protective gloves / eye protection.

Wear protective clothing.

Do not get in eyes, on skin, or on 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.

Call a POISON CENTER/doctor if you feel unwell.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

IF ON SKIN: Wash with plenty of water.

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

- **Other hazards** *Use only for intended scope of application*

- **Results of PBT and vPvB assessment**

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

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/21/2019

Reviewed on 10/21/2019

Trade name: Ufi Gel hard C adhesive

(Contd. of page 1)

· **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

67-64-1	acetone Flam. Liq. 2, H225 Eye Irrit. 2A, H319; STOT SE 3, H336	50-100%
868-77-9	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	2.5-5%

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** 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:** 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 clothing.
- **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

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

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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:** See storage instructions on package
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **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.
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

67-64-1 acetone (50-100%)

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm Long-term value: 594 mg/m ³ , 250 ppm
BEI	

- **Ingredients with biological limit values:**

67-64-1 acetone (50-100%)

BEI	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)
-----	--

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **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

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9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Characteristic

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

- **Flash point:** -19 °C (-2 °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):** 0.8 g/cm³ (6.676 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** 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:**

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

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

- **Additional toxicological information:**

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

Irritant

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- **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.

- **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

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1090

- **UN proper shipping name**

- **DOT**

Acetone mixture

- **ADR**

1090 Acetone mixture

- **IMDG, IATA**

ACETONE mixture

- **Transport hazard class(es)**

- **DOT**



- **Class**

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-D
· Stowage Category	E
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
	Not applicable.
· UN "Model Regulation":	UN 1090 ACETONE MIXTURE, 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):**

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)**

Contact VOCO for more information.

· **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).

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- **Hazard pictograms** GHS02, GHS07
- **Signal word** *Danger*
- **Hazard statements**
 - Highly flammable liquid and vapor.*
 - Causes serious eye irritation.*
 - May cause an allergic skin reaction.*
 - May cause drowsiness or dizziness.*
- **Precautionary statements**
 - Keep away from open flames. - No smoking.*
 - Avoid breathing vapours.*
 - Wear protective gloves / eye protection.*
 - Wear protective clothing.*
 - Do not get in eyes, on skin, or on 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.*
 - Call a POISON CENTER/doctor if you feel unwell.*
 - If skin irritation or rash occurs: Get medical advice/attention.*
 - If eye irritation persists: Get medical advice/attention.*
 - In case of fire: Use for extinction: CO₂, powder or water spray.*
 - IF ON SKIN: Wash with plenty of water.*
 - 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 SDS:** *Scientific department*
- **Contact:** *Tel.: +49 (0)4721-719-0*
- **Date of preparation / last revision:** *10/21/2019 / 13*
- **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 & Health*
 - TLV: Threshold Limit Value*
 - PEL: Permissible Exposure Limit*
 - REL: Recommended Exposure Limit*
 - BEI: Biological Exposure Limit*
 - Flam. Liq. 2: Flammable liquids – Category 2*
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2*
 - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*
 - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*
 - Skin Sens. 1: Skin sensitisation – Category 1*
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*
- *** Data compared to the previous version altered.**