

1 Identification

- **Product identifier**
- **Trade name:** *Solobond M*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Bonding*
- **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.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

- **Label elements**

- **Hazard pictograms** GHS02, GHS07

- **Signal word** *Danger*

- **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

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

If eye irritation persists: Get medical advice/attention.

- **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.*

(Contd. on page 2)

Trade name: Solobond M

(Contd. of page 1)

· Dangerous components:		
67-64-1	acetone	50-100%
1565-94-2	BIS-GMA	10-25%
868-77-9	2-hydroxyethyl methacrylate	5-10%
	Acidic adhesive monomer	5-10%
	Catalyst	≤ 2.5%

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.
- **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** Ensure adequate ventilation
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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.
Prevent formation of aerosols.
- **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:** Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 3)

Trade name: Solobond M

(Contd. of page 2)

- **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:**

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: (1782) NIC-1187 mg/m ³ , (750) NIC-500 ppm
	Long-term value: (1188) NIC-594 mg/m ³ , (500) NIC-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:**

The usual precautionary measures for handling chemicals should be followed.

Avoid contact with the eyes and skin.

- **Protection of hands:**



Protective gloves

- **Material of gloves** Not required.

- **Eye protection:** Safety glasses

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Yellow
Odor:	Characteristic

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

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** < 15 °C (< 59 °F)

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

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

(Contd. on page 4)

Trade name: Solobond M

(Contd. of page 3)

- | | |
|--|--|
| · Density at 20 °C (68 °F): | 0.9 g/cm ³ (7.511 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** 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)

Acidic adhesive monomer

Oral	LD50	> 2000 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
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)**

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.

USA

(Contd. on page 5)

Trade name: Solobond M

(Contd. of page 4)





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.
- **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:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN2924
· UN proper shipping name	
· DOT	Flammable liquids, corrosive, n.o.s. (Acetone, Acidic adhesive monomer)
· ADR	2924 Flammable liquids, corrosive, n.o.s. (Acetone, Acidic adhesive monomer)
· IMDG, IATA	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ACETONE, Acidic adhesive monomer)
· Transport hazard class(es)	
· DOT	
	 
· Class	3 Flammable liquids
· Label	3+8
· ADR, IMDG, IATA	
	 
· Class	3 Flammable liquids
· Label	3+8
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	338

(Contd. on page 6)

USA

Trade name: Solobond M

(Contd. of page 5)

· EMS Number:	F-E,S-C
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN2924, Flammable liquids, corrosive, n.o.s. (Acetone, Acidic adhesive monomer), 3 (8), 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)**

67-64-1 acetone

I

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

67-64-1 acetone

A4

128-37-0 2,6-di-tert-butyl-p-cresol

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 skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

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

(Contd. on page 7)

Trade name: Solobond M

(Contd. of page 6)

If eye irritation persists: Get medical advice/attention.

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** 05/12/2015 / 16

· **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

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

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

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1