



According to 1907/2006/EG, Article 31
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HinriPress Bonding

1. Identification of the Substance / Preparation and Company:

Identification of the substance or preparation:

Commercial product name: HinriPress Bonding
 Application of the substance: Dental bonding material
 Company / Manufacturer:

ERNST HINRICHS Dental GmbH
 Borsigstr. 1
 D - 38644 Goslar
 0 53 21 / 5 06 24
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 info@hinrichs-dental.de / www.hinrichs-dental.de
 ERNST HINRICHS Dental GmbH

2. Hazards identification:

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour



GHS07

Skin Irrit. 2 H315
 Eye Irrit. 2 H319
 Skin Sens. 1 H317
 STOT SE 3 H335

Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 May cause respiratory irritation.

2.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC:



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.



Sensitising

R43: May cause sensitisation by skin contact.



F; Highly flammable.

R11: Highly flammable.

R67: Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification Guideline for preparations of the EU" in the latest valid version.

Has a narcotizing effect.

2.3 Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.4 Label Elements:

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms.



GHS02 GHS07

Signal word:

Danger

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2.5 Hazard-determining components of labelling:

methyl methacrylate
 butanone
 Aliphatic urethane acrylate

2.6 Hazard statements

H225 Highly flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.













Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national / international regulations.

2.7 Other hazards

Results of PBT and vPvB assessment
 PBT: Not applicable
 vPvB: Not applicable

3. Composition/ information on ingredients:

3.1	Chemical characterisation:	Mixtures	
	Description:	Mixture of substances listed below with non-hazardous additions.	
3.3	Dangerous components:		
	CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate  Xi R37/38;  Xi R43;  F R11  Flam. Liq. 2, H225;  Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	25-50 %
	CAS:78-93-3 EINECS: 201-159-0	butanone  Xi R36;  F R11 R66-67  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	25-50 %
		aliphatic urethane acrylate  Xi R36/37/38;  Xi R43;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	2,5-10 %
	Additional Information	For the wording of the listed risk phrases refer to section 16.	



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4. First aid measures:

Description of first aid measures

- 4.1 General Information
- After inhalation: Immediately remove any clothing soiled by the product. Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting. Call a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed
 Headache
 Disziness
 Disziness
 Irritant to skin and eyes
 Sensitization possible through skin contact
 Indication of any immediate medical attention and special treatment needed
- 4.3 No further relevant information available.

5. Firefighting measures:

- 5.1 Extinguishing media
 Suitable extinguishing agents: CO2, sand extinguishing powder. Do not use water.
 For safety reasons unsuitable extinguishing agents: Water.
- 5.2 Special hazards arising from the substance or mixture: Water with full jet.
 Advice for fire-fighters: No further relevant information available.
- 5.3 Protective equipment: Wear self-contained respiratory protective device.

6. Accidental release measures:

- 6.1 Personal precautions, protective equipment and emergency procedures
 Keep away from ignition sources.
 Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions:
 Prevent seepage into sewage system, work pits and cellars.
 Do not allow to enter sewers/ surface or ground water.
- 6.3 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.
- 6.4 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:

- 7.1 Precautions for safe handling: Avoid contact with skin and eyes.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.
- Information about fire - and explosion protection: Fumes can combine with air to form an explosive mixture.
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities

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7.2 Storage:
Requirements to be met by storerooms and receptacles: Store between 15 °C and 30 °C in a dry and well ventilated place. Avoid temperatures exceeding 50 °C or falling below 5 °C. Protect from heat and direct sunlight.

Information about storage in one common storage facility: Not required.
Further information about storage conditions: Store in cool, dry conditions in well, sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

8. Exposure controls/personal protection:

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
80-62-6 methyl methacrylate	
WEL	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm
78-93-3 butanone	
WEL	S Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk., BMGV

8.2 Additional information:
Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
Respiratory protection:
The lists valid during the making were used as basis. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:



Protective gloves

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

Protective gloves should be changed regularly, especially after intensive contact with the product. For every workplace a suitable type of protective gloves must be selected.

Material of gloves: Butyl rubber (0,7 mm) EN 374
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't be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: As there are many different conditions in every day work these indications can only serve as an aid to orientation for the selection of suitable gloves for the handling of chemical products. By no means they can replace qualifying examinations by the end-user. The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

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Eye protection:



Tightly sealed goggles

Body protection:

Protective work clothing.

9. Physical and chemical properties:

9.1	Appearance:	
	Form:	Fluid
	Colour:	Colourless
	Odour:	Characteristic.
	Odour threshold:	Not determined.
	pH-value:	Not determined.
9.2	Change in condition:	
	Melting point/Melting range:	Undetermined.
	Boiling point/Boiling range:	79°C
	Flash point:	- 4°C
	Ignition temperature:	430°C
	Decomposition temperature:	Not determined.
	Self-igniting:	Product is not self-igniting.
	Danger of explosion:	Product is not explosive. However, formation of explosive air / formation of vapour mixtures are possible.
	Explosion limits:	
	Lower:	1,8 Vol %
	Upper:	12,5 Vol %
	Oxidising properties:	Not determined.
	Vapour pressure at 20°C:	105 hPa.
	Density at 20°C:	0,89 g/cm ³
	Relative density:	Not determined.
	Vapour density:	Not determined.
	Evaporation rate:	Not determined.
	Solubility in / Miscibility with water:	Not miscible or difficult to mix.
	Segregation coefficient (noctanol /water):	Not determined.
	Viscosity:	
	Dynamic:	Not determined.
	Kinematic:	Not determined.
9.3	Other information:	No further relevant information available.

10. Stability and reactivity:

10.1	Reactivity:	No decomposition if used according to specifications.
	Chemical stability:	Stable if used according to specifications.
	Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications. Protect from heat and direct sunlight.
10.2	Possibility of hazardous reactions:	Reacts with oxidizing agents. Exothermic polymerization.
10.3	Conditions to avoid:	No further relevant information available.
10.4	Incompatible materials:	No further relevant information available.
10.5	Hazardous decomposition products:	No dangerous decomposition products known.

11. Toxicological information:

Information on toxicological effects

11.1	Information on toxicological effects	
	Acute toxicity:	
	LD/LC50 values relevant for classification:	Methylmethacrylat (MMA): LD-50 oral > 5000 mg/kg rat (Lit.) LC-50 inhalativ 7093 ppm/4h rat (Lit.) alip. Urethanacrylat: LD-50 oral > 2000 mg/kg rat



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11.2 Primary irritant effect:
 on the skin: Irritant to skin and mucous membranes.
 on the eye: Strong irritant with the danger of severe eye injury.
 Sensitisation: Sensitisation possible through skin contact.
 Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant

12. Ecological information:

12.1 Toxicity
 Aquatic toxicity: Fish Toxicity (MMA):
 LC-50 > 79 mg/l OECD 203
 NOEC: 40 mg/l ISO 7346
 Exposure: 96 h EEC84
 Species: 449 V, C1
 Oncorhynchus mykiss
 Bacterial Toxicity: ECO: 100 mg/l
 Species of cells: Pseudomonas putida.


12.2 Persistence and degradability: No further relevant information available.
 12.3 Bioaccumulative potential: No further relevant information available.
 12.4 Mobility in soil: No further relevant information available.
 12.5 Additional ecological information:
 General notes: 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.
 12.6 Other adverse effects: No further relevant information available.

13. Disposal considerations:

13.1 Waste treatment methods:
 Recommendation: Disposal must be made according to official regulations. Must not be disposed together with household garbage. Do not allow product to reach sewage system.
European waste catalogue 070104.

13.2 Uncleaned packaging:
 Recommendation: Disposal must be made according to official regulations.

14. Transport information:

14.1	UN-Number ADR, IMDG, IATA	UN1247
14.2	UN proper shipping name ADR IMDG, IATA	1247 METHYLMETHACRYLAT, MONOMER, STABILISIERT, LÖSUNG METHYL METHACRYLATE MONOMER, STABILIZED, SOLUTION
14.3	Transport hazard class(es) ADR, IMDG, IATA  Class Label	3 Flammable liquids. 3
14.4	Packing group ADR, IMDG, IATA	II



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14.5	Environmental hazards:	
	Marine pollutant:	No
	Special precautions for user	Warning: Flammable liquids.
	Danger code (Kemler):	33
14.6	EMS Number:	F-E,S-E
	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
	Transport/Additional information:	
	ADR	
	Limited quantities (LQ)	1L
	Transport category	2
	Tunnel restriction code	D/E
	UN "Model Regulation"	UN1247, METHYL METHACRYLATE MONOMER, STABILIZED, SOLUTION, 3, II

15. Regulatory information:

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture.					
	National regulations:					
	Information about limitation of use:	Employment restrictions concerning juveniles must be observed. Employment restrictions concerning pregnant and lactating women must be observed.				
15.2	Technical instructions (air):					
		<table border="1"> <thead> <tr> <th>Class</th> <th>Share in %</th> </tr> </thead> <tbody> <tr> <td>NK</td> <td>50-100</td> </tr> </tbody> </table>	Class	Share in %	NK	50-100
Class	Share in %					
NK	50-100					
15.3	Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.				

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.

16.1	Relevant phrases:	
	H225	Highly flammable liquid and vapour.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
	H336	May cause drowsiness or dizziness.
	R11	Highly flammable.
	R36	Irritating to eyes.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	R37/38	Irritating to respiratory system and skin.
	R43	May cause sensitisation by skin contact.
	R66	Repeated exposure may cause skin dryness or cracking.
	R67	Vapours may cause drowsiness and dizziness.
16.2	Abbreviations and acronyms:	
	RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
	ICAO:	International Civil Aviation Organisation
	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
	IATA:	International Air Transport Association
	GHS:	Globally Harmonised System of Classification and Labelling of Chemicals
	EINECS:	European Inventory of Existing Commercial Chemical Substances



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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. 2:	Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1:	Sensitisation - Skin, Hazard Category 1
STOT SE 3:	Specific target organ toxicity - Single exposure, Hazard Category 3