



according to Regulation (EC) No 1907/2006

Revision date: 13.09.2018

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HinriDon Liquid

1. Identification of the Substance / Preparation and Company:

- 1.1 Product identifier
Commercial product name: HinriDon Liquid
Product group: Liquid component
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Creation of dental products
- 1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: ERNST HINRICHS Dental GmbH
Street / mailbox: Borsigstr. 1
Country code. / postal code / city: D - 38644 Goslar
Phone: 0 53 21 / 5 06 24
Fax: 0 53 21 / 5 08 81
E-mail / Website: info@hinrichs-dental.de / www.hinrichs-dental.de
Further information obtainable from: ERNST HINRICHS Dental GmbH
- 1.4 Emergency telephone number
ERNST HINRICHS Dental GmbH: +49 (0) 53 21 / 5 06 24 - 25 (Mon-Fri. 8 a.m. – 4 p.m.)

2. Hazards Identification:

- 2.1 Classification of the substance or mixture:
Regulation (EC) No. 1272/2008
Hazard categories:
Flammable liquid: Flam. Liq. 2
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitisation: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
- 2.2 Label elements:
Hazard components for labelling: Methyl methacrylate
1,4-Butandiol dimethacrylate
Signal word: Danger
Pictograms:

- Hazard statements:
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
Precautionary statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P235 Store in a well-ventilated place. Keep cool.
- 2.3 Other hazards
No information available.



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HinriDon Liquid**3. Composition / Information on Ingredients:**

3.2 Mixtures

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
80-62-6	Methyl methacrylate			90 - < 95 %
	201-297-1		01-2119452498-28	
	Flam. Liq. 1, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H224 H315 H317 H335			
2082-81-7	1,4-Butandiol dimethacrylate			5 - < 10 %
	218-218-1			
	Skin Sens. 1; H317			

Full text of R-, H- and EUH-phrases: see section 16.

4. First aid measures:

4.1 Description of first aid measures:

General information:

Remove contaminated, saturated clothing immediately. If skin irritation or rash occurs get medical advice/attention. If eye irritation persists get medical advice/attention.

After inhalation:

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin:

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

4.2 Most important symptoms and effects, both acute and delayed:

No information available.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

5. Fire Fighting measures:

5.1 Extinguishing media:

Suitable extinguishing media:

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media:

Water.

5.2 Special hazards arising from the substance or mixture:

Flammable. Vapours can form explosive mixtures with air.

5.3 Advice for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information:

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures:

6.1 Personal precautions, protective equipment and emergency procedures:

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2 Environmental precautions:

Do not allow uncontrolled discharge of product into the environment. Danger of explosion



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- 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
- 6.4 Reference to other sections: Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

7. Handling and Storage:

- 7.1 Precautions for safe handling:
Advice on safe handling: If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
Advice on protection against fire and explosion: Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.
- 7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels: Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Advice on storage compatibility: Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.
- 7.3 Specific end use(s): Dental prosthesis.

8. Exposure controls / Personal protection:

- 8.1 Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
80-62-6	Methyl methacrylate			
	Worker DNEL, long-term	inhalation		208 mg/m ³
	Worker DNEL, long-term	dermal		17 mg/kg bw/day

- 8.2 Exposure controls:
Appropriate engineering controls: If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
Protective and hygiene measures: Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary.
When using do not eat or drink.
Eye/face protection: Wear eye/face protection.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Skin protection: Flame-retardant protective clothing. Wear anti-static footwear and clothing.
Respiratory protection: In case of inadequate ventilation wear respiratory protection.



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9.1	Information on basic physical and chemical properties	
	Physical state:	liquid
	Colour:	colourless
	Odour:	characteristic
	pH-Value:	not determined
	Changes in the physical state:	
	Melting point:	-48 °C
	Initial boiling point and boiling range:	100,5 °C
	Flash point:	10 °C
	Flammability	
	Solid:	not applicable
	Gas:	not applicable
	Lower explosion limits:	2,1 vol. %
	Upper explosion limits:	12,5 vol. %
	Ignition temperature:	421 °C
	Auto-ignition temperature:	
	Solid:	not applicable
	Gas:	not applicable
	Decomposition temperature:	not determined
	Oxidizing properties	Not oxidizing.
	Vapour pressure:	
	(at 20 °C)	36 hPa
	Density (at 15,5 °C):	0,949 g/cm ³
	Water solubility:	
	(at 20 °C)	12,5 g/L
	Solubility in other solvents:	not determined
	Partition coefficient:	1,38
	Viscosity / dynamic (at 20 °C):	
		0,53 mPa·s
	Vapour density (at 20 °C):	3,5
	Evaporation rate:	not determined
9.2	Other information	
	Solid content:	not determined

10. Stability and Reactivity:

10.1	Reactivity:	Flammable. Ignition hazard.
10.2	Chemical stability:	The product is stable under storage at normal ambient temperatures.
10.3	Possibility of hazardous reactions:	No known hazardous reactions.
10.4	Conditions to avoid:	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.
10.5	Incompatible materials:	No information available.
10.6	Hazardous decomposition products	No known hazardous decomposition products.

11. Toxicological Information:

11.1	Information on toxicological effects:			
	Acute toxicity:	Based on available data, the classification criteria are not met.		
	ATEmix tested			
		Dose	Species	Source
	LD50, oral	7870 mg/kg	Rat	
	LD50, dermal	> 5000 mg/kg	Rabbit	
	LC50, inhalative (vapour) (4h)	78 mg/l	Rat	

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CAS No	Chemical name	Exposure routes	Dose	Species	Source	Method
80-62-6	Methyl methacrylate	oral	LD50 >5000 mg/kg	Rat	OECD 401	
		dermal	LD50 >5000 mg/kg	Rabbit		
		inhalative vapour	LC50 29,8 mg/l	Rat		
2082-81-7	1,4-Butandiol dimethacrylate	oral	LD50 >10000 mg/kg	Rat		
		dermal	LD50 >3000 mg/kg	Rabbit		

Irritation and corrosivity:

Causes skin irritation. Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects:

May cause an allergic skin reaction. (Methyl methacrylate)

Carcinogenic/mutagenic/toxic effects for reproduction:

Based on available data, the classification criteria are not met.

STOT-single exposure:

May cause respiratory irritation. (Methyl methacrylate)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional information on tests:

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

12. Ecological Information:

Information on elimination (persistence degradability)

12.1 Toxicity

Acute (short-term) fish toxicity

CAS No	Chemical name	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
80-62-6	Methyl methacrylate	Acute fish toxicity	LC50 > 79mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	OECD 203	
		Acute algae toxicity	ErC50 > 110 mg/l	72 h	Selenastrum capricornutum	OECD 201	
		Acute crustacea toxicity	EC50 69 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
		Crustacea toxicity	NOEC 37 mg/l	21 d	Daphnia magna (Big waterflea)	OECD 202	
2082-81-7	1,4-Butandiol dimethacrylate	Acute fish toxicity	LC50 32,5 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
		Acute crustacea toxicity	EC50 7,51 mg/l	48 h	Daphnia magna (Big water flea)	OECD 211	
		Crustacea toxicity	NOEC 7,51 mg/l		Selenastrum capricornutum		

12.2 Persistence and degradability: Biodegradable.

12.3 Bioaccumulative potential: On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
80-62-6	Methyl methacrylate	1,38
2082-81-7	1,4-Butandiol dimethacrylate	3,1

12.4 Mobility in soil:

No adsorption in soil or sediment.

12.5 Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

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12.6 Other adverse effects: No information available.
Further information: Avoid release to the environment.

13. Disposal Considerations:

13.1 Waste treatment methods:
Advice on disposal: Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.
Waste disposal number of waste from residues/unused products:
070208: WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.
Contaminated packaging: Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

14. Transport information:

Land transport (ADR/RID):

14.1 UN number: UN 1247
14.2 UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3 Transport hazard class(es): 3
14.4 Packing group: II
Hazard label: 3
Classification code: F1
Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2
Hazard No: 339
Tunnel restriction code: D/E
Other applicable information (land transport) SAPT: > 60 °C

Inland waterways transport (ADN)

14.1 UN number: UN 1247
14.2 UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3 Transport hazard class(es): 3
14.4 Packing group: II
Hazard label: 3
Classification code: F1
Limited quantity: 1 L
Excepted quantity: E2
Other applicable information (inland waterways transport) SAPT: > 60 °C

Marine transport (IMDG)

14.1 UN number: UN 1247
14.2 UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3 Transport hazard class(es): 3
14.4 Packing group: II
Hazard label: 3
Special Provisions: -
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-D
Other applicable information (marine transport) SAPT: > 60 °C

Air transport (ICAO-TI/IATA-DGR)

14.1 UN number: UN 1247
14.2 UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3 Transport hazard class(es): 3

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14.4	Packing group:	II
	Hazard label:	3
	Limited quantity Passenger:	1 L
	Passenger LQ:	Y-341
	Excepted quantity:	E2
	IATA-packing instructions - Passenger:	353
	IATA-max. quantity - Passenger:	5 L
	IATA-packing instructions - Cargo:	364
	IATA-max. quantity - Cargo:	60 L
	Other applicable information (air transport)	SAPT: > 60 °C
14.5	Environmental hazards	
	ENVIRONMENTALLY HAZARDOUS:	no
14.6	Special precautions for user	
	Warning:	Combustible liquids.
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	not applicable

15. Regulatory information:

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulatory information	
	2010/75/EU (VOC):	95 % (901,55 g/l)
	2004/42/EC (VOC):	95 % (901,55 g/l)
	Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS
	Additional information	To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC
	National regulatory information	
	Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
	Water contaminating class (D):	1 - slightly water contaminating
	Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.
15.2	Chemical safety assessment	Chemical safety assessments for substances in this mixture were not carried out.

16. Other information

16.1	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
	IATA:	International Air Transport Association
	GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
	EINECS:	European Inventory of Existing Commercial Chemical Substances
	ELINCS:	European List of Notified Chemical Substances
	CAS	Chemical Abstracts Service
	LC50:	Lethal concentration, 50%
	LD50:	Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H335	Calculation method

Relevant H and EUH statements (number and full text)

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H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

16.2 Further Information:

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.