




according 1907/2006/EG, Article 31
Date of issue: 27.02.2015 / Version: 2.0
Date of revision: 08.01.2016

Wax adhesive

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

- 1.1 Product identifier
 Tradename: Wax adhesive
 Product description: Solvent, Cyclohexane
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
 Relevant identified uses: Solvent-based adhesive
- 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.)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
 Classification according to Regulation (EC) No 1272/2008:
 Flam. Liq. 2 H225 Highly flammable liquid and vapour.
 Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.
 Skin Irrit. 2 H315 Causes skin irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.
 Classification according to Regulation 67/548/EWG or Regulation 1999/45/EG:
 Xi R38: Irritating to skin.
 F R11: Highly flammable.
 N R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R67: Vapours may cause drowsiness and dizziness.
- 2.2 Label elements
 Labelling according to Regulation (EC) No 1272/2008:
 Hazard pictograms: 
- GHS02 GHS07 GHS09
- Signal word: Danger
 Hazard-determining components of labelling: Cyclohexane
- Hazard statements:
 H225: Highly flammable liquid and vapour.
 H315: Causes skin irritation.
 H336: May cause drowsiness or dizziness.
 H410: Very toxic to aquatic life with long lasting effects.
- Precautionary statements:
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241: Use explosion-proof electrical/ventilating/lighting/equipment.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P405: Store locked up.



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P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.
 vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances Not applicable

3.2 Mixtures

Description: Solvent-based adhesive

Dangerous components:

CAS: 110-82-7 EINECS: 203-806-2 Reg.nr.: 01-2119463273-41 Index: 601-017-00-1	cyclohexane Xn R65; Xi R38; F R11; N R50/53; R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	25-50%
CAS: 107-83-5 EINECS: 203-523-4 Index: 601-007-00-7	2-methylpentane Xn R65; Xi R38; F R11; N R51/53; R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	5- <10%
CAS: 142-82-5 EINECS: 205-563-8 Reg.nr.: 01-2119457603-38 Index: 601-008-00-2	heptane Xn R65; Xi R38; F R11; N R50/53; R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	5- <10%
CAS: 110-54-3 EINECS: 203-777-6 Reg.nr.: 01-2119480412-44 Index: 601-037-00-0	n-hexane Xn R48/20-62-65; Xi R38; F R11; N R51/53; R67; Repr. Cat. 3 Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	< 2,5%

Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Instantly remove any clothing soiled by the product. Take affected persons into the open air.

After inhalation: In case of unconsciousness bring patient into stable side position for transport. Supply fresh air.

After skin contact: Instantly 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. If symptoms persist, consult doctor.

After swallowing: Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Water haze
 Foam
 Fire-extinguishing powder
 Carbon dioxide



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| For safety reasons unsuitable extinguishing agents:
5.2 Special hazards arising from the substance or mixture:
5.3 Advice for firefighters
Protective equipment:
Additional information: | Water with a full water jet.

Formation of toxic gases is possible during heating or in case of fire.
Do not inhale explosion gases or combustion gases.
Wear self-contained breathing apparatus.
Dispose of fire debris and contaminated firefighting water in accordance with official regulations.
Collect contaminated firefighting water separately. It must not enter drains. |
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SECTION 6: Accidental release measures

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| 6.1 Personal precautions, protective equipment and emergency procedures:

6.2 Environmental precautions:

6.3 Methods and material for containment and cleaning up:

6.4 Reference to other sections: | Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Use breathing protection against the effects of fumes/dust/aerosol.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, surface or ground water.
Ensure adequate ventilation.
Send for recovery or disposal in suitable containers. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal. |
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SECTION 7: Handling and storage

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| 7.1 Precautions for safe handling

Information about protection against explosions and fires:

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Storage class:
7.3 Specific end use(s) | Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Ensure that suitable extractors are available on processing machines. Take note of emission threshold.
Use solvent-proof equipment.
Keep away from children
Avoid release to the environment.
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Highly volatile, flammable constituents are released during processing.
Fumes can combine with air to form an explosive mixture.
Flammable mixtures may be formed in empty containers.
Keep dark, cool and dry.
3 (flammable liquid)
No further relevant information available. |
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:	
110-82-7 cyclohexane	
WEL	Short-term value: 1050 mg/m ³ , 300 ppm Long-term value: 350 mg/m ³ , 100 ppm
142-82-5 heptane	
WEL	Long-term value: 2085 mg/m ³ , 500 ppm
110-54-3 n-hexane	
WEL	Long-term value: 72 mg/m ³ , 20 ppm
DNEL	
110-82-7 cyclohexane	
Dermal, chronic exposure, systemic effects:	13964 mg/kg bw/day (worker)
Inhalation, chronic exposure, systemic effect:	5306 mg/m ³ (worker)
142-82-5 heptane	
Oral:	149 mg/kg bw/d (general population)
Dermal:	149 mg/kg bw/d (general population) 300 mg/kg bw/d (worker)
Inhalation:	447 mg/m ³ (general population) 2085 mg/m ³ (worker)
PNEC:	
No further relevant information available	

Additional information:	Based on information valid at the time of writing.
8.2 Exposure controls:	
Additional information about design of technical systems:	Please take care on national and local requirements.
General protective and hygienic measures:	Keep away from food, drink and animal feedingstuffs. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
Personal protective equipment:	
Protection of hands:	Solvent resistant gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves:	Nitrilbutylrubber, NBR (≥0.4 mm), Butylrubber, BR
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:	Tightly sealed safety glasses.
Breathing equipment:	In case of brief exposure or low pollution (exceeding of TLV) use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air. Not necessary if room is well-ventilated. Ensure that suitable extractors are available on processing machines.
Recommended filter device for short term use:	Filter A
Body protection:	Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties



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General Information

Appearance:	Liquid.
Physical state:	Liquid.
Colour:	Yellowish, transparent.
Odour:	Characteristic.
Odour threshold:	Not determined.
pH:	Not determined.
Melting point/Freezing point	Not determined.
Boiling point/Boiling range:	77 °C
Flash point:	-20 °C
Flammability (solid, gas):	Not applicable.
Auto-ignition temperature:	Product is not self-igniting.
Decomposition temperature:	Not determined.
Oxidising properties	Not determined
Explosive properties:	Product is not explosive. However, formation of explosive vapour/air mixtures is possible.

Explosive Limits:

Lower:	1,2 Vol %
Upper:	8,3 Vol %
Vapour pressure at 20 °C:	104 hPa
Density at 20 °C:	0,83 g/cm ³
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined
Solubility:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Approx. 3 000 mPa s (20°C)
kinematic:	> 3 600 mm ² /s (20°C)

9.2 Other information

Solvent content:	No further relevant information available.
Organic solvents:	60,0 %
Solids content:	40,0 %

SECTION 10: Stability and reactivity

10.1 Reactivity	No dangerous reactions known.
10.2 Chemical stability	
Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions	Develops readily flammable vapours / fumes.
10.4 Conditions to avoid	No further relevant information available.
10.5 Incompatible materials	No further relevant information available.
10.6 Hazardous decomposition products	No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	Not classified Based on available data, the classification criteria are not met

LD/LC50 values that are relevant for classification:		
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110-82-7 cyclohexane		
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Oral	LD50	12705 mg/kg (rat)
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Skin corrosion/irritation:	Causes skin irritation.
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Serious eye damage/irritation:	Not classified Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation:	Not classified Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Not classified Based on available data, the classification criteria are not met.
Carcinogenicity:	Not classified Based on available data, the classification criteria are not met.
Reproductive toxicity:	Not classified Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure):	May cause drowsiness or dizziness:
Specific target organ toxicity (repeated exposure):	Not classified Based on available data, the classification criteria are not met.
Aspiration hazard:	Not classified Based on available data, the classification criteria are not met.
Potential adverse human health effects and symptoms:	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	Very toxic for aquatic organisms.
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 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Recommendation:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste. Incineration under approved, controlled conditions using incinerators suitable or designed for the disposal of hazardous chemical wastes, is the preferred method for disposal.

European waste catalogue	
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

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

SECTION 14: Transport information

14.1 UN number	
ADR, IMDG, IATA:	UN1133



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14.2 UN proper shipping name	
ADR:	ADHESIVES
IMDG:	ADHESIVES
IATA:	ADHESIVES
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Klasse:	3 Flammable liquids.
Danger labels:	3
14.4 Packing group	
ADR, IMDG, IATA:	II
14.5 Environmental hazards	Yes
Marine pollutant:	Yes
Special marking:	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Flammable liquids.
Kemler Number:	33
EMS Number:	F-E,S-D
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ):	5L
Excepted quantities (EQ):	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category:	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ):	5L
Excepted quantities (EQ):	Code: E2
Remarks::	Suitable UN approved container necessary.
UN "Model Regulation":	UN 1133 ADHESIVES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
National regulations:	
Other regulations, limitations and prohibitive regulations:	
VOC (EU) in %:	60,00 %
VOC (EU) in g/l:	500,4 g/l
15.2 Chemical safety assessment	A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

Adjustments compared to earlier versions

Section 8.2	Protection of hands: Additional Information
Section 9.1	Viscosity: Additional Information
Section 14.4	Packaging group adjusted
Section 14.7	Transport information adjusted
Relevant phrases	
H225:	Highly flammable liquid and vapour.



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- H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H336: May cause drowsiness or dizziness.
 H361f: Suspected of damaging fertility.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H400: Very toxic to aquatic life.
 H411: Toxic to aquatic life with long lasting effects.
 R11: Highly flammable.
 R38: Irritating to skin.
 R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R62: Possible risk of impaired fertility.
 R65: Harmful: may cause lung damage if swallowed.
 R67: Vapours may cause drowsiness and dizziness.
- 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 Harmonised 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 (division of the American Chemical Society)
 VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 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
 Repr. 2: Reproductive toxicity, Hazard Category 2
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2