



According to Regulation (EC) No. 1272/2008  
 Revision: 18.05.2017 Version number: 1,0

page 1 von 8  
 Printing date: 20.09.2017

**HinriMill Liquid**

**1. Identification of the Substance / Preparation and Company:**

- 1.1 Product identifier  
 Commercial product name: HinriMill Liquid
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
 Identified uses: Handling, dilution and transfers.  
 Water-miscible metal working fluid. Industrial use.
- Uses advised against: None known.
- 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:  
 The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.  
 Classification according to Regulation (EC) No 1272/2008 as amended: This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.
- 2.2 Label elements  
 Label according to Regulation (EC) No. 1272/2008 as amended  
 Hazard pictograms: None.  
 Signal word: None.  
 Hazard statements: The mixture does not meet the criteria for classification.  
 Precautionary statements  
 Prevention: Observe good industrial hygiene practices.  
 Response: Wash hands after handling.  
 Storage: Store away from incompatible materials.  
 Disposal: Dispose of waste and residues in accordance with local authority requirements.
- Supplemental label information: None.
- 2.3 Other hazards: None known.

**3. Composition/information on ingredients**

3.2 Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Ethanol, 2-(2-butoxyethoxy)-	1 - < 5	112-34-5 203-961-6	01-2119475104-44-xxxx	603-096-00-8	#
Classification:		Eye Irrit. 2;H319			
Ethanol, 2,2'-(methylimino)bis-	1 - < 5	105-59-9 203-312-7	01-2119488970-24-xxxx		
Classification:		Eye Irrit. 2;H319			
Other components below reportable levels			60-100		

List of abbreviations and symbols that may be used above: #: This substance has been assigned Community workplace exposure limit(s).  
 Composition comments: The full text for all H-statements is displayed in section 16.



**HinriMill Liquid**

**4. First aid measures**

4.1	General information:	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
	Inhalation:	Move to fresh air. Call a physician if symptoms develop or persist.
	Skin contact:	Wash off with soap and water. Get medical attention if irritation develops and persists.
	Eye contact:	Rinse with water. Get medical attention if irritation develops and persists.
	Ingestion:	Rinse mouth. Get medical attention if symptoms occur.
4.2	Most important symptoms and effects, both acute and delayed:	Exposure may cause temporary irritation, redness, or discomfort.
4.3	Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

**5. Fire-fighting measures**

	General fire hazards	No unusual fire or explosion hazards noted.
5.1	Extinguishing media Suitable extinguishing media:	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
	Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
5.2	Special hazards arising from the substance or mixture:	During fire, gases hazardous to health may be formed.
5.3	Advice for firefighters Special protective equipment for firefighters: Special firefighting procedures: Hazardous combustion products:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Move containers from fire area if you can do so without risk. Combustion products may include the following: Carbon oxides (CO, CO <sub>2</sub> ); nitrogen oxides (NO, NO <sub>2</sub> ).

**6. Accidental release measures**

6.1	Personal precautions, protective equipment and emergency procedures For non-emergency personnel:	Keep unnecessary personnel away. For personal protection, see section 8.
	For emergency responders:	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2	Environmental precautions:	Avoid discharge into drains, water courses or onto the ground.
6.3	Methods and material for containment and cleaning up:	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4	Reference to other sections:	For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

**7. Handling and storage**

7:1	Precautions for safe handling:	Avoid prolonged exposure. Observe good industrial hygiene practices.
-----	--------------------------------	----------------------------------------------------------------------



**HinriMill Liquid**

- 7.2 Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
- 7.3 Specific end use(s): Not available.

**8. Exposure controls/Personal protection**

8.1 Control parameters

Occupational exposure limits  
 EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)	STEL	101,2 mg/m <sup>3</sup>
	TWA	15 ppm
		67,5 mg/m <sup>3</sup> 10 ppm

Biological limit values : No biological exposure limits noted for the ingredient(s).  
 Recommended monitoring procedures: Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Components	Type	Route	Value	Form
Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)	Industry	Dermal	20 mg/kg/day	Long-term exposure, systemic effects
		Inhalation	67,5 mg/m <sup>3</sup>	Long-term exposure, systemic effects
Ethanol, 2,2'-(methylimino)bis- (CAS 105-59-9)	Industry	Dermal	19 mg/m <sup>3</sup>	Long-term exposure, systemic effects
		Inhalation	26 mg/m <sup>3</sup>	Long-term exposure, systemic effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)	Industry	Not applicable	200 mg/l	Sewage plant
		Soil	0,4 mg/kg/day	Soil
		Water	4 mg/kg/day	Freshwater sediment
		Water	0,4 mg/kg/day	Seawater Sediment
		Water	3,9 mg/l	Seawater
		Water	1 mg/l	Freshwater
Ethanol, 2,2'-(methylimino)bis- (CAS 105-59-9)	Industry	Water	0,89 mg/kg/day	Freshwater sediment
		Water	0,11 mg/kg/day	Saltwater sediment
		Water	0,1 mg/l	Freshwater
		Water	0,013 mg/l	Saltwater

8.2 Exposure controls:

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment



According to Regulation (EC) No. 1272/2008

Revision: 18.05.2017

Version number: 1,0

page 4 von 8

Printing date: 20.09.2017

**HinriMill Liquid**

General information:	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin protection	
- Hand protection:	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Recommendation: 706 Lapren (KCL, Germany) with a layer thickness of at least 0.6 mm. 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 cannot be calculated in advance and has therefore to be checked prior to the application.
- Other:	Wear suitable protective clothing.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards:	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls:	Environmental manager must be informed of all major releases.

**9. Physical and chemical properties**

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	Liquid.
Colour:	Light yellow.
Odour:	Mild.
Odour threshold:	Not available.
pH:	9,6 DIN 51369
Melting point/freezing point:	Not available.
Initial boiling point and boiling range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%):	Not available.
Flammability limit - upper (%):	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	Not available.
Solubility(ies)	
Solubility (water)	Soluble.
Solubility (other):	Not available.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	Not explosive.



According to Regulation (EC) No. 1272/2008  
 Revision: 18.05.2017 Version number: 1,0

page 5 von 8  
 Printing date: 20.09.2017

**HinriMill Liquid**

Oxidising properties: Not oxidising.  
 9.2 Other information  
 Density: 1052,00 kg/m3 DIN 51757  
 Kinematic viscosity: 6 mm2/s DIN 53018

**10. Stability and reactivity**

10.1 Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.  
 10.2 Chemical stability: Material is stable under normal conditions.  
 10.3 Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.  
 10.4 Conditions to avoid: High temperatures. Contact with incompatible materials.  
 10.5 Incompatible materials: Strong oxidising agents.  
 10.6 Hazardous decomposition products: No hazardous decomposition products are known.

**11. Toxicological information**

General information: Occupational exposure to the substance or mixture may cause adverse effects.  
 Information on likely routes of exposure  
 Inhalation: Prolonged inhalation may be harmful.  
 Skin contact: No adverse effects due to skin contact are expected.  
 Eye contact: Direct contact with eyes may cause temporary irritation.  
 Ingestion: May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.  
 Symptoms: Exposure may cause temporary irritation, redness, or discomfort.

11.1 Information on toxicological effects

Components	Species	Test results
Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)		
<u>Acute</u>		
<b>Dermal</b>		
Liquid		
LD50	Rabbit	2764 mg/kg
<b>Oral</b>		
Liquid		
LD50	Mouse	2410 mg/kg
Ethanol, 2,2'-(methylimino)bis- (CAS 105-59-9)		
<u>Acute</u>		
<b>Dermal</b>		
Liquid		
LD50	Rabbit	5990 mg/kg
Oral		
Liquid		
LD50	Rat	4680 mg/kg

\* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.  
 Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.  
 Respiratory sensitisation: Based on available data, the classification criteria are not met.  
 Skin sensitisation: Based on available data, the classification criteria are not met.  
 Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
 Carcinogenicity: Based on available data, the classification criteria are not met.  
 Reproductive toxicity: Based on available data, the classification criteria are not met.  
 Specific target organ toxicity - single exposure: Based on available data, the classification criteria are not met.



According to Regulation (EC) No. 1272/2008

Revision: 18.05.2017

Version number: 1,0

page 6 von 8

Printing date: 20.09.2017

**HinriMill Liquid**

Specific target organ toxicity - repeated exposure: Based on available data, the classification criteria are not met.  
 Aspiration hazard: Based on available data, the classification criteria are not met.  
 Mixture versus substance information: No information available.  
 Other information: Not available.

**12. Ecological information**

12.1 Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components	Species	Test results
Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)		
Aquatic		
Acute		
Algae	EC50	Desmodesmus subspicatus (Scendesmus subspicatus) > 100 mg/l, 72 hours
	NOEC	Desmodesmus subspicatus (Scendesmus subspicatus) > 100 mg/l, 96 hours
Crustacea	EC50	Daphnia magna 2840 mg/l, 24 hours
Fish	LC50	Bluegill (Lepomis macrochirus) 1300 mg/l, 96 hours
Ethanol, 2,2'-(methylimino)bis- (CAS 105-59-9)		
Acute		
Other	EC20	Activated sludge > 1000 mg/l, 30 minutes
Aquatic		
Acute		
Algae	EC50	Algae 176 mg/l, 72 hours
Crustacea	EC50	Daphnia magna 233 mg/l, 48 hours
	NOEC	Crustacea > 100 mg/l, 96 hours
Fish	LC50	Ide, silver or golden orfe (Leuciscus idus) 1466 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

12.2 Persistence and degradability: No data is available on the degradability of this product.  
 12.3 Bioaccumulative potential  
 Partition coefficient n-octanol/water (log Kow): Ethanol, 2-(2-butoxyethoxy)-1  
 Bioconcentration factor (BCF): Not available.  
 12.4 Mobility in soil: No data available.  
 12.5 Results of PBT and vPvB assessment: Not available.  
 12.6 Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

13.1 Waste treatment methods  
 Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).  
 Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.



According to Regulation (EC) No. 1272/2008

Revision: 18.05.2017

Version number: 1,0

page 7 von 8

Printing date: 20.09.2017

**HinriMill Liquid**

EU waste code:	Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC on hazardous waste. 12 01 10 *: synthetic machining oils. 12 01 09 *: machining emulsions and solutions free of halogens. The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Special precautions:	Dispose in accordance with all applicable regulations.

**14. Transport information**

ADR:	Not regulated as dangerous goods.
RID:	Not regulated as dangerous goods.
ADN:	Not regulated as dangerous goods.
IATA:	Not regulated as dangerous goods.
IMDG:	Not regulated as dangerous goods.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Not established.

**15. Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU regulations	
Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended:	Not listed.
Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended:	Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended:	Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended:	Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended:	Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended:	Not listed.
Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended:	Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA:	Not listed.
Authorisations	



According to Regulation (EC) No. 1272/2008

Revision: 18.05.2017

Version number: 1,0

page 8 von 8

Printing date: 20.09.2017

**HinriMill Liquid**

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: Restrictions on use Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended: Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended: Other EU regulations Directive 2012/18/EU on major accident hazards involving dangerous substances: Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended: Directive 94/33/EC on the protection of young people at work, as amended Other regulations:  National regulations: 15.2 Chemical safety assessment:	Not listed.  Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5)  Not listed.  Not listed.  Not listed.  Ethanol, 2-(2-butoxyethoxy)- (CAS 112-34-5) Ethanol, 2,2'-(methylinino)bis- (CAS 105-59-9)  Not listed.  The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. Follow national regulation for work with chemical agents. No Chemical Safety Assessment has been carried out.
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**16 Other information**

List of abbreviations: References: Information on evaluation method leading to the classification of mixture: Full text of any H-statements not written in full under Sections 2 to 15: Revision information: Training information: Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The editor cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. Approved.	Not available. Not available. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. H319 Causes serious eye irritation.  None. Follow training instructions when handling this material.  TR18052017
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------