



according to Regulation (EC) No. 1907/2006  
Revision date: 11.11.2022 Version 1.9

Page 1 of 10  
Printing date: 06.06.2023

## Hinrivest Liquid High Ex

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

---

#### 1.1. Product identifier

Identification of the substance or preparation:

Commercial product name: Hinrivest Liquid High Ex

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture Inorganic binder, surface modifier and flocculating agent.

This substance/ mixture contains nanoforms

#### 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](mailto:info@hinrichs-dental.de) / [www.hinrichs-dental.de](http://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 (Mon-Fri. 8 a.m. – 4 p.m.)

### SECTION 2: Hazards identification

---

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Not a hazardous substance or mixture.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008):

Not a hazardous substance or mixture.

#### 2.3 Other hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

---

#### 3.2 Mixtures

Chemical nature:

Amorphous Silica, aqueous colloidal solution.



according to Regulation (EC) No. 1907/2006  
 Revision date: 11.11.2022 Version 1.9

Page 2 of 10  
 Printing date: 06.06.2023

**Hinrivest Liquid High Ex**

**Components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Substances with a workplace exposure limit:			
Silicon dioxide, amorphous	7631-86-9 231-545-4 01-2119379499-16		>= 40 - < 50

For explanation of abbreviations see section 16.

Remarks: Substances with a workplace exposure limit  
 This substance/ mixture contains nanoforms

**Components:**

**Silicon dioxide, amorphous:**

**Particle characteristics**

**Particle size:**

**Particle Size Distribution:**

**Assessment:**

Further particle properties for nanomaterials see section 9  
 Further particle properties for nanomaterials see section 9  
 Assessment: This substance/ mixture contains nanoforms based on: Measurement data

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General advice:**

No hazards which require special first aid measures.

**If inhaled:**

If breathed in, move person into fresh air. If symptoms persist, call a physician.

**In case of skin contact:**

Remove contaminated clothing and shoes. Rinse with water.

**In case of eye contact:**

Rinse with plenty of water.  
 Remove contact lenses.  
 Protect unharmed eye.  
 Keep eye wide open while rinsing.

**If swallowed:**

Clean mouth with water and drink afterwards plenty of water.  
 Never give anything by mouth to an unconscious person.

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

**Symptoms:**

No information available.

**Risks:**

No information available.

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

**Treatment:**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1 Suitable extinguishing agents:**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**5.2 Special hazards during firefighting:**

No hazards to be specially mentioned.





according to Regulation (EC) No. 1907/2006  
 Revision date: 11.11.2022 Version 1.9

Page 4 of 10  
 Printing date: 06.06.2023

**Hinrivest Liquid High Ex**

7.3 Specific end use(s): No information available.

**SECTION 8: Exposure controls/personal protection**

8.1 Control parameters

Components with workplace control parameters:

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Silicon dioxide, amorphous	7631-86-9	AGW (Inhalable fraction)	4 mg/m3 (Silica)	DE TRGS 900
<b>Further Information:</b>	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

8.2 Exposure controls:

**Engineering Controls:** Effective exhaust ventilation system.

**Personal protective equipment**

Eye/face protection: Safety glasses

Hand protection  
 Material: PVC

Material: Rubber gloves

Respiratory protection: No personal respiratory protective equipment normally required.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

**Physical state:** liquid

**Colour:** white

**Odour:** odourless

**Odour threshold:** No data available.

**Melting point / Melting range:** 0°C

**Boiling point / Boiling range:** 100°C

**Flammability:** Not applicable

**Upper explosion limit / Upper flammability limit:** Not applicable

**Lower explosion limit / Lower flammability limit:** Not applicable

**Flash point:** Not applicable

**Auto-ignition temperature:** Not applicable

**Decomposition temperature:** No data available

**ph:** 9 - 11

**Viscosity**

**Viscosity, dynamic:** < 20 mPa.s (20 °C)

**Viscosity, kinematic:** No data available

**Solubility(ies)**

**Water solubility:** dispersible

**Solubility in other solvents:** No data available

**Partition coefficient: n- octanol/water:** Not applicable

**Vapour pressure:** ca. 23 hPa (20 °C)

**Relative density:** 1,200 - 1,400

**Relative vapour density:** No data available

**Particle characteristics:**

**Assessment** Assessment: This substance/ mixture contains nanoforms



according to Regulation (EC) No. 1907/2006  
 Revision date: 11.11.2022 Version 1.9

Page 5 of 10  
 Printing date: 06.06.2023

## Hinrivest Liquid High Ex

**Particle size:** 1 - 100 nm  
 Method: ISO 22412  
**Particle Size Distribution:** D50 = 23 nm ± 7 nm  
 Measurement method: ISO 22412  
**Shape:** Shape: spheres

### 9.2 Other information

**Explosives:** Not explosive  
**Oxidizing properties:** Not classified as oxidising.  
**Flammability (liquids):** The product is not flammable.  
**Self-ignition:** Not applicable  
**Evaporation rate:** No data available

## SECTION 10: Stability and reactivity

**10.1 Reactivity:** Stable under normal conditions.

**10.2 Chemical stability:** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions:** No dangerous reaction known under conditions of normal use.

**10.4 Conditions to avoid:** Avoid drying out of the solution as this can lead to a build up of dust.

**10.5 Incompatible materials:**  
 Materials to avoid: Copper  
 Mild steel  
 Aluminium

**10.6 Hazardous decomposition products:** No hazardous decomposition products are known.

**Thermal decomposition:** No data available.

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity:** Not classified based on available information.  
**Product:**  
 Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg  
 Remarks: The value is estimated from tests on similar products.

**Components:**  
**Silicon dioxide, amorphous:**  
 Acute oral toxicity: LD50 (Rat): > 10.000 mg/kg

**Skin corrosion/irritation:** Not classified based on available information.

**Serious eye damage/eye irritation:** Not classified based on available information.

**Respiratory sensitisation:** Not classified based on available information.  
**Product:**  
**Method:** (Magnusson-Kligman):  
**Result:** Did not cause sensitisation on laboratory animals.  
**Remarks:** The value is estimated from tests on similar products.



according to Regulation (EC) No. 1907/2006  
 Revision date: 11.11.2022 Version 1.9

Page 6 of 10  
 Printing date: 06.06.2023

**Hinrivest Liquid High Ex**

<b>Germ cell mutagenicity: Product: Genotoxicity in vitro:</b>	Not classified based on available information.  Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Remarks: The value is estimated from tests on similar products.
<b>Carcinogenicity:</b>	Not classified based on available information.
<b>Reproductive toxicity:</b>	Not classified based on available information.
<b>STOT - single exposure:</b>	Not classified based on available information.
<b>STOT - repeated exposure:</b>	Not classified based on available information.
<b>Aspiration hazard:</b>	Not classified based on available information.

**11.2 Information on other hazards  
 Endocrine disrupting properties**

<b>Product: Assessment</b>	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
--------------------------------	---

<b>Further information Remarks:</b>	Information given is based on data on the components and the toxicology of similar products.
---	--

**SECTION 12: Ecological information**

**12.1 Toxicity**

Toxicity to fish:	LC50 (Danio rerio (zebra fish)): > 5.000 mg/l Exposure time: 96 h Remarks: The value is estimated from tests on similar products.
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Ceriodaphnia dubia (water flea)): 7.600 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products.
Toxicity to algae/aquatic plants:	NOEC (Selenastrum capricornutum (green algae)): 60 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products.  EC50 (Selenastrum capricornutum (green algae)): 120 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products.  EC10 (Selenastrum capricornutum (green algae)): 140 mg/l Exposure time: 48 h Remarks: The value is estimated from tests on similar products.



according to Regulation (EC) No. 1907/2006  
 Revision date: 11.11.2022 Version 1.9  
**Hinrivest Liquid High Ex**

Page 7 of 10  
 Printing date: 06.06.2023

**12.2 Persistence and degradability**  
 Biodegradability:

Result: Not applicable  
 Remarks: inorganic  
 Result: Not applicable  
 inorganic

Biochemical Oxygen Demand (BOD):

Remarks: No data available

**12.3 Bioaccumulative potential**  
 Product:

Bioaccumulation:

Remarks: No bioaccumulation is expected.

**12.4 Mobility in soil**  
 Product:

Mobility:

Remarks: No test results, Under extreme circumstances, transport from earth to water may take place.

Distribution among environmental compartments:

Remarks: Transport to air is not expected.

**12.5 Results of PBT and vPvB assessment**  
 Product:

Assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Endocrine disrupting properties**  
 Product:

Assessment:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**  
 Product:

Additional ecological information:

None known.

**SECTION 13: Disposal considerations**

---

**13.1 Waste treatment methods**  
 Contaminated packaging:

Empty remaining contents.  
 Empty containers should be taken to an approved waste handling site for recycling or disposal.

**SECTION 14: Transport information**

---

**14.1 UN number or ID number:**

ADN:	Not regulated as a dangerous good
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good
IATA_P:	Not regulated as a dangerous good

**14.2 UN proper shipping name:**

ADN:	Not regulated as a dangerous good.
ADR:	Not regulated as a dangerous good
RID:	Not regulated as a dangerous good
IMDG:	Not regulated as a dangerous good



**Hinrivest Liquid High Ex**

<b>IATA_P:</b>	Not regulated as a dangerous good
<b>14.3 Transport hazardous class:</b>	Not regulated as a dangerous good.
<b>ADN:</b>	Not regulated as a dangerous good
<b>ADR:</b>	Not regulated as a dangerous good
<b>RID:</b>	Not regulated as a dangerous good
<b>IMDG:</b>	Not regulated as a dangerous good
<b>IATA_P:</b>	Not regulated as a dangerous good
<b>14.4 Packing group:</b>	Not regulated as a dangerous good.
<b>ADN:</b>	Not regulated as a dangerous good
<b>ADR:</b>	Not regulated as a dangerous good
<b>RID:</b>	Not regulated as a dangerous good
<b>IMDG:</b>	Not regulated as a dangerous good
<b>IATA_P:</b>	Not regulated as a dangerous good
<b>14.5 Environmental hazards:</b>	Not regulated as a dangerous good.
<b>14.6 Special precautions for user:</b>	
Remarks:	Not classified as dangerous in the meaning of transport regulations.
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b>	Not applicable for product as supplied.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture:**

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:	Not applicable
Regulation (EC) 850/2004 on persistent organic pollutants:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and Council concerning the export and import of dangerous chemicals:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances:	Not applicable
Water hazard class (Germany):	nwg not water endangering Classification according to AwSV, Annex (2.2)





according to Regulation (EC) No. 1907/2006  
Revision date: 11.11.2022 Version 1.9

Page 9 of 10  
Printing date: 06.06.2023

## Hinrivest Liquid High Ex

TA Luft List (Germany):

Total dust: Not applicable  
Inorganic substances in powdered form: Not applicable  
Inorganic substances in vapour or gaseous form: Not applicable  
Organic Substances: Not applicable  
Carcinogenic substances: Not applicable  
Mutagenic: Not applicable  
Toxic to reproduction: Not applicable

### The components of this product are reported in the following inventories:

TSCI: On the inventory, or in compliance with the inventory  
TSCA: All substances listed as active on the TSCA inventory  
AIIC: On the inventory, or in compliance with the inventory  
DSL: All components of this product are on the Canadian DSL  
ENCS: On the inventory, or in compliance with the inventory  
ISHL: On the inventory, or in compliance with the inventory  
Keco: On the inventory, or in compliance with the inventory  
PICCS: On the inventory, or in compliance with the inventory  
IECSC: On the inventory, or in compliance with the inventory  
NZIoC: On the inventory, or in compliance with the inventory

### 15.2 Chemical Safety Assessment:

Product information: not required

Silicon dioxide, amorphous: A Chemical Safety Assessment is not required for this substance.

### SECTION 16: Other information

#### Full text of other abbreviations

DE TRGS 900: Germany, TRGS 900 - Occupational exposure limit values  
DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -



according to Regulation (EC) No. 1907/2006  
Revision date: 11.11.2022                                   Version 1.9

Page 10 of 10  
Printing date: 06.06.2023

## **Hinrivest Liquid High Ex**

Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### **Further information:**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.