

Safety Data Sheet

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

1.1 Product identifier

INTERLABOSIL CATALYST

1.2. Relevant identified uses of the substance or mixture and uses advised against
 Catalyst for polymerization of hydroxyl dimethylpolysiloxane.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:	INTERDENT d.o.o.	<i>Production:</i> INTERDENT d.o.o.
Street:	Opekarniška cesta 26	Dol 1
Country code /Postal code/City:	SI-3000 Celje	SI-3342 Gornji Grad
Telephone:	+386(0) 425-62-00	
Fax:	+368(0) 490-62-02	

1.4 Emergency telephone number

Emergency phone:	112 (EU)
	+386(0) 425-62-00 (8.00-16.00)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

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

Hazard class	Hazard category	Hazard statements
Flammable liquids	Hazard Category 3	H226: Flammable liquid and vapor.
Acute toxicity (oral)	Hazard Category 4	H302: Harmful if swallowed.
Aspiration hazard	Hazard Category 1	H304: May be fatal if swallowed and enters airways.
Skin corrosion/irritation	Hazard Category 1A	H314: Causes severe skin burns and eye damage.
Sensitisation - Skin	Hazard Category 1	H317: May cause an allergic skin reaction.
Acute toxicity (inhal.)	Hazard Category 1	H330: Fatal if inhaled.
Germ cell mutagenicity	Hazard category 2	H341: Suspected of causing genetic defects.
Reproductive toxicity	Hazard Category 1B	H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity – Single exposure	Hazard Category 2	H371: May cause damage to organs.
Specific target organ toxicity – Repeated exposure	Hazard Category 1	H372: May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment	Chronic Hazard, Category 1	H410: Toxic to aquatic life with long lasting effects.

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2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008:

Hazard pictograms:



Signal word: DANGER

Hazard Statement(s):

H226: Flammable liquid and vapor.

H302: Harmful if swallowed.

H304: May be fatal if swallowed and enters airways.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H330: Fatal if inhaled.

H341: Suspected of causing genetic defects.

H360FD: May damage fertility. May damage the unborn child.

H371: May cause damage to organs.

H372: May cause damage to organs through prolonged or repeated exposure.

H410: Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Response:

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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. IF exposed or concerned: Get medical advice/attention.

Disposal:

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Substances on the label:

Contains: tetraethyl silicate; ethyl silicate

Silicic acid (H₄SiO₄), tetraethyl ester, reaction products with bis(acetyloxy)dibutylstannane
Tetramethyl orthosilicate

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5,5-Dibutyl-3,3,7,7-tetramethoxy-2,4,6,8-tetraoxa-3,7-disila-5-Stannanonane

2.3 Other hazards:

Substance(s) formed under the conditions of use:

Chemical name	Concentration	CAS Number	EC No	REACH Registration	Index No
Methanol	<5%	67-56-1	200-659-6		/
Ethanol, Ethyl alcohol	<10%	64-17-5	200-578-6		/

SECTION 3: Composition / information on ingredients

3.1 Mixture

Chemical Name	CAS Nr. EC-Number INDEX number	%	Classification according to EC 1272/2008	
			Hazardous class/hazardous category	Hazardous phrases
Benzene C10-13 alkyl derives	67774-74-7 / /	< 23	Asp.Tox.1	H304
Tetraethyl silicate; ethyl silicate	78-10-4 201-083-8 014-005-00-0	<10	Flam.Liq.3 Acute Tox.4 Eye irrit.2 STOT SE 3	H226 H332 H319 H335
Silicic acid (H ₄ SiO ₄), tetraethyl ester, reaction products with bis(acetyloxy)di buthylstannane	93925-42-9 / /	<5	Flam.Liq.3 Acute.Tox.4 Acute.Tox.4 Skin Corr 1A Repr. 1B Muta. 2 STOT SE 1 STOT RE 1 Aquatic Chronic 1 Aquatic Acute 1 Skin. Sens 1	H226 H302 H332 H314 H360FD H341 H370 H372 H410 H400 H317
Tethramethyl orthosilicate	681-84-5 / /	<5	Flam.Liq.3 Acute.Tox.1 Skin irrit. 2 Eye Dam.1	H226 H330 H315 H318

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5,5-Dibutyl- 3,3,7,7- tetramethoxy- 2,4,6,8-tetraoxa- 3,7-disila-5- stannonane	94134-56-2 / /	<3	Flam.Liq.3 Acute.Tox.4 Skin Corr.1A Repr. 1B Muta. 2 STOT SE 1 STOT RE 1 Aquatic Chronic 1 Aquatic Acute 1 Skin Sens 1	H226 H302 H332 H314 H360FD H341 H370 H372 H410 H400 H317
Ethyl acetate	141-78-6 205-500-4 607-022-00-5	<2	Flam.Liq 2 Eye Irrit 2 STOT SE 3	H225 H319 H336
2-ethylhexanoic acid	149-57-5 205-743-6 607-230-00-6	<1	Repr.2	H361d
Methanol	67-56-1 200-659-6 603-001-00-X	<0,1	Flam. Liq 2 Acute.Tox 3 Acute Tox 3 Acute Tox 3 STOT SE 1	H225 H331 H311 H301 H370
Ethanol,ethyl alcohol	64-17-5 200-578-6 603-002-00-5	<0,1	Flam Liq 2 Eye Dam 2	H225 H319

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General: Get medical attention if symptoms occur. Contaminated clothing to be placed in closed container until disposal or decontamination.

Inhalation: Move into fresh air and keep at rest.

Eye contact: In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes.

Skin Contact: Remove contaminated clothing and shoes. Wash with soap and water.

Ingestion: Do not induce vomiting. Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: No specific recommendations.

Treatment: No specific recommendations.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Extinguish with foam, carbon dioxide or dry powder.

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

Flammable.

5.3 Advice for firefighters

Water spray should be used to cool containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapor. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental precautions

Collect spillage. Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Container must be kept tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Absorb with sand or other inert absorbent. To clean the floor and all objects contaminated by this material, use an appropriate solvent. (cf. : § 9) Flush area with plenty of water. Incinerate in suitable combustion chamber. Notification Procedures: Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the SDS.

6.4 Reference to other sections

Safe handling: see section 7. Personal protection equipment: see section 8. Disposal: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Adequate ventilation should be provided so that exposure limits are not exceeded. Avoid forming spray/aerosol mists. Ground container and transfer equipment to eliminate static electric sparks. Open container carefully and only in a dry, oxygen-free or inert atmosphere. Use explosionproof electrical/ventilating/lighting/equipment.

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7.2 Conditions for safe storage, including any incompatibilities

Avoid discharge into drains, water courses or onto the ground. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Nitrogen blanketing of containers is required. Avoid contact with oxidizing agents.

Suitable containers: Steel drums coated with epoxy-resin.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical name: Tetraethyl silicate; ethyl silicate: OEL 8 h: 5 ppm, 44 mg/m³; KTV: 5 ppm, 44 mg/m³

Chemical name: Tetramethyl orthosilicate: OEL 8 h: 0,3 ppm, 2 mg/m³; KTV: 0,3 ppm, 2 mg/m³

Chemical name: 5,5-Dibutyl-3,3,7,7-tetramethoxy-2,4,6,8-tetraoxa-3,7-disila-5-stannanonane – Inhalable fraction. - as Sn: OEL 0,1 mg/m³

Chemical name: Ethyl acetate: OEL 8 h: 200ppm, 734 mg/m³; KTV: 400ppm, 1468 mg/m³

Additional exposure limits under the conditions of use

Chemical name: methanol: OEL 8 h: 200 ppm, 260 mg/m³; KTV: 800 ppm, 1040 mg/m³

Chemical name: ethanol, ethyl alcohol: OEL: 8 h: 960 mg/m³, 500 ppm; KTV: 1000 ppm, 1920 mg/m³

8.2 Exposure controls

Appropriate engineering controls: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Use engineering controls to reduce air contamination to permissible exposure level. Get medical advice/attention.

Individual protection measures, such as personal protective equipment:

General information: Provide sufficient ventilation during operations which cause vapor formation.

Eye/face protection: Safety goggles (EN 166:2001)

Skin protection: Hand Protection: Rubber gloves are recommended (EN 374-1)

Other: It is a good industrial hygiene practice to minimize skin contact. Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory Protection: If ventilation is insufficient, suitable respiratory protection must be provided (EN 136:1998; 140:1999/AC:2000; EN 14387:2004+A1:2008).

Hygiene measures: Provide eyewash station and safety shower.

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Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

<i>Physical state:</i>	Liquid
<i>Form:</i>	Extremely viscous.
<i>Color:</i>	Red
<i>Odor:</i>	Mint.
<i>Odor Threshold:</i>	No data available.
<i>pH:</i>	Not applicable.
<i>Freezing point:</i>	No data available.
<i>Boiling Point:</i>	No data available.
<i>Flash Point:</i>	24 °C (Closed cup according to method ASTM D-56.)
<i>Evaporation Rate:</i>	No data available.
<i>Flammability (solid, gas):</i>	No data available.
<i>Flammability Limit - Upper (%)-:</i>	No data available.
<i>Flammability Limit - Lower (%)-:</i>	No data available.
<i>Vapor pressure:</i>	No data available.
<i>Vapor density (air=1):</i>	No data available.
<i>Relative density:</i>	1 (20 °C) Approximate

Solubility(ies):

<i>Solubility in Water:</i>	Practically Insoluble
<i>Solubility (other):</i>	Diethylether.: Miscible (in all proportions).
<i>Chlorinated solvents.:</i>	Miscible (in all proportions).
<i>Aromatic hydrocarbons.:</i>	Miscible (in all proportions).
<i>Aliphatic hydrocarbons.:</i>	Miscible (in all proportions).
<i>Acetone.:</i>	Very slightly soluble.
<i>Ethanol.:</i>	Very slightly soluble.
<i>Partition coefficient (n-octanol/water):</i>	No data available.
<i>Autoignition Temperature:</i>	No data available.
<i>Decomposition Temperature:</i>	No data available.
<i>Viscosity:</i>	3 000 000 mm ² /s
<i>Explosive properties:</i>	No data available.
<i>Oxidizing properties:</i>	According to the data on the components Not considered as oxidizing. (evaluation by structure-activity relationship)

SECTION 10: Stability and reactivity

10.1 Reactivity:	No other information noted.
10.2 Chemical Stability:	Stable.
10.3 Possibility of Hazardous Reactions:	Reacts slowly on contact with water or humidity.
10.4 Conditions to Avoid:	No other information noted.
10.5 Incompatible Materials:	Strong oxidizing agents.
10.6 Hazardous Decomposition Products:	

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During vulcanisation, on contact with the catalyst, releases flammable vapours which may generate fire or explosion hazards toxic vapours. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Amorphous silica.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Acute toxicity:

Oral: Product: ATEmix (): 1 538,54 mg/kg Harmful if swallowed.

Dermal: Product: Not classified for acute toxicity based on available data.

Inhalation: Product: ATEmix (4 h): 0,21 mg/l Vapor

Repeated dose toxicity: Product: Composition/information on ingredients

Specified substance(s): tetraethyl silicate; ethyl silicate NOAEL (Rat): 50 mg/kg

Skin Corrosion/Irritation: Product: Causes severe skin burns and eye damage.

Serious Eye Damage/Eye Irritation: Product: Causes serious eye damage.

Respiratory or Skin Sensitization:

Product: May cause an allergic skin reaction.

Germ Cell Mutagenicity:

In vitro: Product: Contains a substance which may have a mutagenic effect.

In vivo: Product: No data available.

Carcinogenicity:

Product: No data available.

Reproductive toxicity:

Product: May damage fertility. May damage the unborn child.

Reproductive toxicity (Fertility):

Product: No data available.

Developmental toxicity (Teratogenicity):

Product: No data available.

Specific Target Organ Toxicity - Single Exposure:

Product: May cause damage to organs.

Specific Target Organ Toxicity - Repeated Exposure:

Product: May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:

Product: No data available.

Other Adverse Effects:

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No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity:

Fish:

Product: Composition/information on ingredients

Specified substance(s):

tetraethyl silicate; ethyl silicate: LC 50 (Zebra danio (Danio rerio), 96 h): 245 mg/l Mortality

ethyl acetate: LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 399 - 602 mg/l Mortality

2-ethylhexanoic acid: LC 50 (Atlantic Salmon, 96 h): 180 mg/l

LC 50 (Common Carp, 48 h): > 302 mg/l

Methanol: LC 50 (Bluegill (Lepomis macrochirus), 96 h): 15 400 mg/l

ethanol; ethyl alcohol: LC 50 (Bleak (Alburnus alburnus), 96 h): 11 000 mg/l Mortality

Aquatic Invertebrates:

Product: Composition/information on ingredients

Specified substance(s):

tetraethyl silicate; ethyl silicate: EC 50 (Water flea (Daphnia magna), 48 h): > 75 mg/l Mortality

ethyl acetate LC 50 (Water flea (Daphnia magna), 48 h): 819 mg/l Mortality

2-ethylhexanoic acid: EC 50 (Water flea (Daphnia magna), 48 h): 85,38 mg/l

methanol LC 50 (Water flea (Daphnia magna), 48 h): > 10 000 mg/l

ethanol; ethyl alcohol LC 50 (Water flea (Daphnia magna), 48 h): 12 310 - 14 724 mg/l Mortality

Chronic Toxicity:

Fish:

Product: No data available.

Aquatic Invertebrates:

Product: Composition/information on ingredients

Specified substance(s):

2-ethylhexanoic acid: NOEC (Water flea (Daphnia magna), 21 d): 25 mg/l

Toxicity to Aquatic Plants:

Product: Composition/information on ingredients

Specified substance(s):

tetraethyl silicate; ethyl silicate EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): >= 22 mg/l

2-ethylhexanoic acid EC 50 (Alga, 72 h): 49,3 mg/l

methanol EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): 22 000 mg/l

12.2 Persistence and Degradability

Biodegradation:

Product: Composition/information on ingredients

Specified substance(s):

tetraethyl silicate; ethyl silicate: 98 % (28 d) Expected to be readily biodegradable.

2-ethylhexanoic acid: 90 - 100 % (28 d) The product is easily biodegradable. 85 - 95 % (6 d)

Methanol: Expected to be readily biodegradable.

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BOD/COD Ratio:

Product: No data available.

12.3 Bioaccumulative Potential

Product: No data available.

Specified substance(s):

tetraethyl silicate; ethyl silicate: Bioconcentration Factor (BCF): 3,16 The product is not bioaccumulating.

ethyl acetate Green algae (*Chlorella fusca vacuolata*), Bioconcentration Factor (BCF): 13 500

methanol: Will not bio-accumulate.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB assessment

Composition/information on ingredients

tetraethyl silicate; ethyl silicate: None Reported

12.6 Other Adverse Effects

No data available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Methods of disposal: Dispose in accordance with Regulation about handling with waste.

Waste category: 16 03 05* Organic wastes containing dangerous substances

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SECTION 14: Transport Information			
	ADR/RID	IMDG	IATA
14.1 UN number	UN 1992		
14.2 UN proper shipping name	flammable liquid, toxic, n.o.s		
14.3 Transport hazard class(es)			
Class	3		
Label(s)	3, 6.1	3, 6.1	3, 6.1
Hazard identification	36	/	/
EmS	/	F-E, S-D	/
14.4 Packing group	III		
14.5 Environmental hazards	Dangerous for the environment	Marine pollutant	n.a.
14.6 Special precautions for user	No special precautions		Passenger and cargo aircraft: Allowed Cargo aircraft only: Allowed
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable		

SECTION 15: Regulatory information

1.1 Elements of the label



DANGER

Flammable liquid and vapour. / Harmful if swallowed. / May be fatal if swallowed and enters airways. / Causes severe skin burns and eye damage. / May cause an allergic skin reaction. / Fatal if inhaled. / Suspected of causing genetic defects. / May damage fertility. May damage the unborn child. / May cause damage to organs / Causes damage to organs through prolonged or repeated exposure. / Very toxic to aquatic life with long lasting effects. / Keep away from heat/spark/open flames/hot surfaces. / No smoking. / IF SWALLOWED: Immediately call POISON CENTER or doctor/physician. / IF ON SKIN (or hair): Remove/take off

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immediately all contaminated clothing. / IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. / IF EXPOSED or concerned: Get medical advice/attention.

Substances on the label:

Ethyl silicate, Silicic acid (H₄SiO₄), tetraethyl ester, reaction products with bis(acetyloxy)dibuthylstannane, tetramethyl orthosilicate, 5,5-Dibutyl-3,3,7,7-tetramethoxy-2,4,6,8-tetraoxa-3,7-disila-5-stannone

15.2 Evaluation of chemical safety

There is no data available.

SECTION 16: Other information

Revision:

Version 03 issued on January 2020 in accordance with EC 1907/2006 (Commission Regulation (EU) 2015/830) and EC 1272/2008.

Legend of abbreviations:

ADR – European agreement concerning the international carriage of dangerous goods by road

CAS – Chemical Abstracts Service

CLP – Classification, Labeling and Packaging

CMR – Carcinogenic, Mutagenic or toxic for Reproduction

DNEL - Derived no-effect level

EC₅₀: Half maximal effective concentration

EmS – Emergency Schedule

GHS – Globally Harmonised System of Classification and Labeling of Chemicals

IATA – International Air Transport Association

IMDG – International Maritime Dangerous Goods Code

LC₅₀: Lethal concentration, 50%

LD₅₀: Median lethal dose; the dose causing 50% lethality

MARPOL – International convention for the prevention of pollution from ships

NOEC - No-observed-effect concentration

OEL - Occupational exposure limit

OECD - Organisation for Economic Co-operation and Development

PBT – Persistent Bioaccumulative Toxic

PNEC: Predicted no-effect concentration

Ppm – parts per million

REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals

RID – Regulation concerning the international carriage of dangerous goods by rail

vPvB – very Persistent and very Bioaccumulative

References:

Directive 1907/2006 (REACH) with all implementations and amendments
Directive 1272/2008 (CLP, EU GHS) with all implementations and amendments
Safety data sheets of the substances for the product

Directive EC 1907/2006 and 1272/2008 with all amendments and implementations

Council Directive 98/24/EC with all implementations and amendments

Official Gazette RS, No. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18, 78/19;

Directive 2008/98/EC with all amendments, Official Gazette RS 37/15, 69/15.

Martindale: The Extra Pharmacopoeia, 13. edition

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European convention about international transport of hazardous material ADR
Dangerous Goods Regulations (DGR) for the air transport (IATA)
International Maritime Dangerous Goods Code IMDG

Disclaimer of expressed and implied warranties:

The information contained in the safety data sheet have been translated from the manufacturer, revised in accordance with the Slovenian legislation. Guidelines for the safe use, handling, disposal, storage and transportation and cannot be used as a guarantee. The information relates only to the specific product and is not suitable for combining with other materials or for use in another process as described in the instructions.