Revision: 03.07.2024

Data sheet for medical devices / EU

Printing date 03.07.2024

Version number 2 (replaces version 1)

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

- · 1.1 Product identifier
- · Trade name: Ionolux powder
- · Chemical Identification:

This product is a medical device according to Directive 93/42/EEC concerning medical devices or Regulation (EU) 2017/745 (MDR), which is used invasively or in contact with the body. Therefore, it is exempt from the classification and labelling requirements of Regulation (EC) 1272/2008 (AR CLP, Article 1, paragraph 5 d). A safety data sheet is not required by law for this product. This information is provided on a voluntary basis in the form of this Medical Devices Data Sheet.

- · Product category Dental medical device
- · Article category

The information relevant for the application and for the safety of users and patients is defined in the product-specific directions for use. The instructions for use must be observed.

The product should only be applied by a professionally trained dental practitioner.

· Application of the substance / the mixture

Resin-reinforced light-curing radiopaque glass ionomer restorative material.

- · 1.3 Details of the supplier of the data sheet
- · Manufacturer/Supplier:

VOCO GmbH Anton-Flettner-Str. 1-3 D-27472 Cuxhaven info@voco.de

+49 (0) 4721-719-0 Mo - Fr / 08:00h - 16:00h

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

This product is a medical device according to Directive 93/42/EEC concerning medical devices or Regulation (EU) 2017/745 (MDR), which is used invasively or in contact with the body. Therefore, it is exempt from the classification and labelling requirements of Regulation (EC) 1272/2008 (AR CLP, Article 1, paragraph 5 d). The classification criteria of Regulation (EC) No 1272/2008 are not directly applicable to this product, but are considered by us as an orienting basis for assessment. The health and environmental hazards have been assessed and classified on the basis of the information known to us on the components and their reaction processes. The following hazards based on the classification criteria of Regulation (EC) No 1272/2008 for humans and the environment cannot be excluded:

The product is not classified, according to the CLP regulation.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.
- · Dangerous components:

polyacrylic acid

Eye Irrit. 2, H319

2.5-10%

· Additional information:

Further information on ingredients can be found in the instructions for use.

In case of known hypersensitivity to the ingredients mentioned in the instructions for use, do not use the product.

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Trade name: Ionolux powder

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SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 In case of contact with mucous membranes during treatment: Remove excess immediately.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- · 6.2 Environmental precautions: No special measures required.
- 6.3 Methods and material for containment and cleaning up: Pick up mechanically.
- · 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

No special precautions are necessary if used correctly.

For use in dental application only.

Observe the instructions for use! This contains the relevant application and safety information for the use of this product.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Please observe the storage instructions on the packaging and in the instructions for use.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· Additional information:

Due to the proportions contained in relation to the amount of product during use and the way it is incorporated into the product, monitoring of specific, workplace-related limit values is not applicable.

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Trade name: Ionolux powder

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· 8.2 Exposure controls

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

In the context of the use of this product, the hygiene standards customary and general in dental practice, such as hand, mouth and eye protection, must be applied.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state Solid

• Colour: According to product specification

Odour: Characteristic
 Odour threshold: Not determined.
 Melting point/freezing point: Undetermined.

· Boiling point or initial boiling point and boiling

range Undetermined.
• Flammability Not determined.

· Lower and upper explosion limit

Lower:
Upper:
Not determined.
Not applicable.
Pecomposition temperature:
Not applicable.
Not applicable.
Not applicable.
Not applicable.
Viscosity:

Kinematic viscosityDynamic:Not applicable.Not applicable.

· Solubility

water: Insoluble.
Partition coefficient n-octanol/water (log value)
Vapour pressure: Not applicable.

Density and/or relative density

Density: Not determined.
Relative density Not determined.
Vapour density Not applicable.

· 9.2 Other information

· Appearance:

· Form: Powder

Important information on protection of health and environment, and on safety.

· Auto-ignition temperature: Product is not selfigniting.

• Explosive properties: Product does not present an explosion hazard.

· Solvent content:

· Solids content: 100.0 %

• Change in condition After mixing the powder and liquid according to the

instructions for use, the product is cured by exposure to

light.

Follow the instructions for light curing in the

Instructions for Use.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

After mixing the powder and liquid according to the instructions for use, the product is cured by exposure to light.

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Trade name: Ionolux powder

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- · 10.2 Chemical stability Stable.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials:

Phenolic substances, especially preparations containing eugenol and thymol, lead to curing disorders. The use of zinc oxide-eugenol cements or other eugenol-containing materials in combination with this product should be avoided.

Residues of preparations containing thymol, eugenol or clove oil lead to curing problems and should therefore be avoided.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· Other information

As an invasive medical device, the product is subject to relevant laws and standards which ensure the safety and performance of the product when used appropriately and in accordance with the instructions for use. Specific toxicological information is not applicable at this point. The instructions for use must be observed.

SECTION 12: Ecological information

· General notes:

As an invasive medical device, the product is subject to relevant laws and standards that ensure the safety and performance of the product when used properly and in accordance with the instructions for use. Special environmental information is not applicable at this point. The instructions for use must be observed.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Dispose of in accordance with official regulations.
- · Uncleaned packaging:
- · Recommendation: Dispose of in accordance with official regulations.

14.1 UN number or ID number		
ADR, IMDG, IATA	Void	
14.2 UN proper shipping name		
ADR, IMDG, IATA	Void	
14.3 Transport hazard class(es)		
ADR, ADN, IMDG, IATA		
Class	Void	
14.4 Packing group		
ADR, IMDG, IATA	Void	
14.5 Environmental hazards:	Not applicable.	
14.6 Special precautions for user	Not applicable.	
14.7 Maritime transport in bulk according	to IMO	
instruments	Not applicable.	

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Trade name: Ionolux powder

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· UN "Model Regulation":

Void

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Regulation (EU) 2017/745

Medical Devices Regulation

Directive 93/42/EEC concerning medical devices

· 15.2 Chemical safety assessment:

The health and environmental hazards have been assessed and classified on the basis of the information known to us on the components and their reaction processes.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The product to which this data sheet is assigned is a medical device according to the EU Medical Devices Regulation EU 2017/745. Invasive medical devices or medical devices in direct body contact are exempted from the classification and labelling requirements of Regulation (EU) 1272/2008 (AR CLP, Article I, paragraph 5 d). The Medical Devices Regulation does not require a safety data sheet for invasive medical devices or medical devices in direct body contact, as the safe use of the product is indicated in the instructions for use and/or the labelling. Nevertheless, we provide a data sheet for medical devices in order to provide as transparent a source as possible for the assessment of hazards to humans and the environment.

· Relevant phrases

H319 Causes serious eye irritation.

- · Department issuing Datasheet: Knowledge Communication Department
- · Contact:

Global headquarter:

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Level 19, 133-145 Castlereagh Street

Sydney, NSW 2000 Email: info@voco.com

For further contact information, please visit www.voco.dental

- · Version number of previous version: 1
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Revision: 03.07.2024

Printing date 03.07.2024

Version number 2 (replaces version 1)

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

- · 1.1 Product identifier
- · Trade name: Ionolux liquid
- · Chemical Identification:

This product is a medical device according to Directive 93/42/EEC concerning medical devices or Regulation (EU) 2017/745 (MDR), which is used invasively or in contact with the body. Therefore, it is exempt from the classification and labelling requirements of Regulation (EC) 1272/2008 (AR CLP, Article 1, paragraph 5 d). A safety data sheet is not required by law for this product. This information is provided on a voluntary basis in the form of this Medical Devices Data Sheet.

- · Product category Dental medical device
- · Article category

The information relevant for the application and for the safety of users and patients is defined in the product-specific directions for use. The instructions for use must be observed.

The product should only be applied by a professionally trained dental practitioner.

· Application of the substance / the mixture

Resin-reinforced light-curing radiopaque glass ionomer restorative material.

- · 1.3 Details of the supplier of the data sheet
- · Manufacturer/Supplier:

 $VOCO\ GmbH$

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SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

This product is a medical device according to Directive 93/42/EEC concerning medical devices or Regulation (EU) 2017/745 (MDR), which is used invasively or in contact with the body. Therefore, it is exempt from the classification and labelling requirements of Regulation (EC) 1272/2008 (AR CLP, Article 1, paragraph 5 d). The classification criteria of Regulation (EC) No 1272/2008 are not directly applicable to this product, but are considered by us as an orienting basis for assessment. The health and environmental hazards have been assessed and classified on the basis of the information known to us on the components and their reaction processes. The following hazards based on the classification criteria of Regulation (EC) No 1272/2008 for humans and the environment cannot be excluded:

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Mixtures
- · **Description:** Mixture of substances listed below with nonhazardous additions.

	1 0		
	· Dangerous components:		
ı	HEMA	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	25-50%
Ī	<i>GlyDMA</i>	Eye Irrit. 2, H319	10-25%
Ī	UDMA	Aquatic Chronic 2, H411; Skin Sens. 1, H317	10-25%
	polyacrylic acid	Eye Irrit. 2, H319	2.5-10%

· Additional information:

Further information on ingredients can be found in the instructions for use.

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Trade name: Ionolux liquid

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In case of known hypersensitivity to the ingredients mentioned in the instructions for use, do not use the product.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 In case of contact with mucous membranes during treatment: Remove excess immediately.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- · 6.2 Environmental precautions: No special measures required.
- 6.3 Methods and material for containment and cleaning up: Pick up mechanically.
- 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special precautions are necessary if used correctly.

For use in dental application only.

Observe the instructions for use! This contains the relevant application and safety information for the use of this product.

- · Information about fire and explosion protection: Keep ignition sources away Do not smoke.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep container tightly sealed.

Please observe the storage instructions on the packaging and in the instructions for use.

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Trade name: Ionolux liquid

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SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace:
- · Additional information:

Due to the proportions contained in relation to the amount of product during use and the way it is incorporated into the product, monitoring of specific, workplace-related limit values is not applicable.

- · 8.2 Exposure controls
- · Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

In the context of the use of this product, the hygiene standards customary and general in dental practice, such as hand, mouth and eye protection, must be applied.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state Fluid · Colour: Colourless · Odour: Characteristic · Odour threshold: Not determined. Undetermined. · Melting point/freezing point:

· Boiling point or initial boiling point and boiling

Undetermined. range · Flammability Not applicable.

· Lower and upper explosion limit

Not determined. · Lower: Not determined. · Upper: · Flash point: *Not applicable.* Not determined. · Decomposition temperature: Not determined. *∙ pH*

· Viscosity:

· Kinematic viscosity *Not determined.* · Dynamic: Not determined.

·Solubility

Fully miscible. · water: · Partition coefficient n-octanol/water (log value) Not determined. Not determined.

· Vapour pressure: · Density and/or relative density

 $1.06 \, g/cm^3$ · Density at 20 °C: Not determined. · Relative density Not determined. · Vapour density

9.2 Other information

· Appearance:

· Form: Liquid

· Important information on protection of health and environment, and on safety.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

(Contd. on page 4)

Printing date 03.07.2024 Version number 2 (replaces version 1) Revision: 03.07.2024

Trade name: Ionolux liquid

	(Contd. of page 3)
· Change in condition	After mixing the powder and liquid according to the instructions for use, the product is cured by exposure to light. Follow the instructions for light curing in the Instructions for Use.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

After mixing the powder and liquid according to the instructions for use, the product is cured by exposure to light.

- · 10.2 Chemical stability Stable.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials:

Phenolic substances, especially preparations containing eugenol and thymol, lead to curing disorders. The use of zinc oxide-eugenol cements or other eugenol-containing materials in combination with this product should be avoided.

Residues of preparations containing thymol, eugenol or clove oil lead to curing problems and should therefore be avoided.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· Other information

As an invasive medical device, the product is subject to relevant laws and standards which ensure the safety and performance of the product when used appropriately and in accordance with the instructions for use. Specific toxicological information is not applicable at this point. The instructions for use must be observed.

SECTION 12: Ecological information

· General notes:

As an invasive medical device, the product is subject to relevant laws and standards that ensure the safety and performance of the product when used properly and in accordance with the instructions for use. Special environmental information is not applicable at this point. The instructions for use must be observed.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- **Recommendation** Dispose of in accordance with official regulations.
- · Uncleaned packaging:
- · Recommendation: Dispose of in accordance with official regulations.
- · Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN	I number	or ID	number
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· ADR, IMDG, IATA Void

· 14.2 UN proper shipping name

· ADR, IMDG, IATA Void

(Contd. on page 5)

Printing date 03.07.2024 Version number 2 (replaces version 1) Revision: 03.07.2024

Trade name: Ionolux liquid

		(Contd. of page 4)
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Void	
· 14.4 Packing group · ADR, IMDG, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Maritime transport in bulk according instruments	to IMO Not applicable.	
· UN "Model Regulation":	Void	

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Regulation (EU) 2017/745

Medical Devices Regulation

Directive 93/42/EEC concerning medical devices

· 15.2 Chemical safety assessment:

The health and environmental hazards have been assessed and classified on the basis of the information known to us on the components and their reaction processes.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The product to which this data sheet is assigned is a medical device according to the EU Medical Devices Regulation EU 2017/745. Invasive medical devices or medical devices in direct body contact are exempted from the classification and labelling requirements of Regulation (EU) 1272/2008 (AR CLP, Article 1, paragraph 5 d). The Medical Devices Regulation does not require a safety data sheet for invasive medical devices or medical devices in direct body contact, as the safe use of the product is indicated in the instructions for use and/or the labelling. Nevertheless, we provide a data sheet for medical devices in order to provide as transparent a source as possible for the assessment of hazards to humans and the environment.

· Relevant phrases

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

- · Department issuing Datasheet: Scientific department
- · Contact:

Global headquarter: VOCO GmbH

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Printing date 03.07.2024 Version number 2 (replaces version 1) Revision: 03.07.2024

Trade name: Ionolux liquid

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For further contact information, please visit www.voco.dental

· Version number of previous version: 1

· Abbreviations and acronyms:

ADR: Accord relatif au transport international 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3