

SAFETY DATA SHEET according to Regulation 1907/2006

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

Cerec Optispray 200ml

Product code

[6317932]



chemius.net/bYbec

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

Use

Auxiliary for the manufacture of dental prostheses.

Uses advised against

No information

1.3. Details of the supplier of the safety data sheet

Manufacturer

Sirona Dental Systems GmbH
Address: Fabrikstrasse 31, D-6462 Bensheim, Germany
Tel.: +49 6251 16-0
Fax: +49 6251 16-2591
e-mail: contact@sirona.com

1.4. Emergency telephone number

Emergency

112

Supplier

Poison Centre in Mainz: +49 (0) 6131 19240

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Reg. 1272/2008

Aerosol 2; H223 Flammable aerosol.
Aerosol 2; H229 Pressurised container: May burst if heated.
STOT SE 3; H336 May cause drowsiness or dizziness.
Aquatic Chronic 3; H412 Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

2.2 Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: **Warning**

H223 Flammable aerosol.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

H229 Pressurised container: May burst if heated.

EUH066 Repeated exposure may cause skin dryness or cracking.

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container to an industrial incineration plant.

2.2.2. Contains:

pentane (CAS: 109-66-0, EC: 203-692-4, Index: 601-006-00-1)

2.2.3. Special provisions

Special hazards are not known or expected.

2.3. Other hazards

No information

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

Chemical name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 [CLP]	REACH reg. number
1,1,1,2,3,3,3- heptafluoropropane	431-89-0 207-079-2 -	≥90	Press. Gas; H280	-
pentane	109-66-0 203-692-4 601-006-00-1	5-<10	Flam. Liq. 1; H224 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411	-

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General measures

Do not leave affected person unsupervised. Move out of dangerous area. Keep the victim calm. Keep the injured warm. Take off all contaminated clothing immediately. Never give anything by mouth to an unconscious person. Place patient stably in side position for transportation. When in doubt or if symptoms do not disappear seek medical help. Show to physician Safety data sheet and label.

Inhalation

In the event of breathing difficulties, get medical advice/attention immediately. Leave contaminated area - breathe fresh air. If necessary give first aid and artificial respiration.

Skin contact

Wash thoroughly with plenty of water and soap! If feeling unwell seek medical help.

Eye contact

Immediately flush eyes with running water, keeping eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, seek professional medical attention.

Ingestion

Not likely. (aerosol) Accidental ingestion: Rinse mouth with water (only if the victim is conscious). Do not induce vomiting. In case of doubt or if feeling unwell seek medical help. Show the physician the Safety Data Sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

Vapours may cause drowsiness and dizziness.
Excessive exposure to spray mist, fog, or vapour may cause respiratory irritation.
Coughing, sneezing, nasal discharge, labored breathing.

Skin contact

Contact with skin may cause irritation (redness, itching).
May cause drying/defatting on repeat or prolonged exposure.

Eye contact

Contact with eyes can cause irritation (redness, tearing, pain).

Ingestion

Ingestion is unlikely
Accidental ingestion:
May cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

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SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

BC powder.
Water spray.

Unsuitable extinguishing media

Full water jet.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can generate; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO₂).

Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours. Co-ordinate fire-fighting measures to the fire surroundings. Fight fire from a reasonable distance. Prolonged heating can cause explosion. Cool containers at risk with water spray jet. If possible remove containers from endangered area.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective clothing for fire-fighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137) .

Additional information

Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8). Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Emergency procedures

Ensure adequate ventilation. Keep away from sources of ignition; No smoking! Prevent sparks. Evacuate the danger zone. Prevent access to unauthorised personnel. Prevent access to unprotected personnel. Do not breathe vapour or mist.

6.1.2. For emergency responders

Use personal protective equipment.

6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If larger amounts are released call fire brigade or information centre.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

Close release only if it is without risk.

6.3.2. For cleaning up

Collect spray containers and dispose them according to regulation. Release of liquid because of damaged aerosol can (release of large quantities): Absorb product (with inert material), collect it in special container and dispose it according to valid regulations on handling with waste. Dispose in accordance with applicable regulations (see section 13). Collect and dispose contaminated water.

6.3.3. Other information

Shafts and sewers must be protected from entry of the product. See Section 5 for firefighting measures. See Section 10: stability and reactivity.

6.4. Reference to other sections

See also sections 8 and 13.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation. Keep away from sources of ignition - No smoking. Pressurized container; protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray onto open flame or glowing material.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Avoid release to the environment.

7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices-wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe vapours/mist. Before entering areas where food is eaten, remove contaminated clothing and protective equipment. Never place chemicals in containers that are normally used for food or drink. Use only in well-ventilated areas.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Store in accordance with local regulations. Keep in cool and well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Protect from direct sunlight. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

7.2.2. Packaging materials

Use only containers specifically permitted for this substance/product.

7.2.3. Requirements for storage rooms and vessels

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7.2.4. Storage class

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7.2.5. Further information on storage conditions

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7.3. Specific end use(s)

Recommendations

See identified uses in Section 1.2.

Industrial sector specific solutions

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure limit values

Chemical name (CAS)	Limit values		Short-term exposure limit		Remarks	Biological Tolerance Values
	ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³		
Pentane (109-66-0)	600	1800	-	-		

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

8.1.3. DNEL values

For components

Chemical name	Type	exp. route	exp. frequency	value	Remark
pentane (109-66-0)	Worker	dermal	long term (systemic effects)	432 mg/kg bw/day	
pentane (109-66-0)	Worker	inhalation	long term (systemic effects)	3000 mg/m ³	

8.1.4. PNEC values

For components

Chemical name	exp. route	value	Remark
pentane (109-66-0)	water treatment plant	3,6 mg/L	
pentane (109-66-0)	water, intermittent release	880 µg/l	

8.2. Exposure controls

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices-wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with eyes and skin. Do not breathe vapours/aerosols. If technical measures to reduce workers' exposure are not sufficient, and the limit values of hazardous substances in the air are exceeded, it is necessary to use personal protective equipment. Use personal protective equipment that is clean and has been properly maintained.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in the area with increased concentration.

8.2.2. Personal protective equipment

Eye and face protection

Wear protection for eyes/face. Safety goggles (EN 166).

Hand protection

Protective gloves (EN 374). Plan out resting phases for skin recuperation. It is recommended to use preventative skin protection (skin cream). Wash hands after every use.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Butyl	0,6 mm	480 min	
Viton (fluorinated rubber)	0,6 mm	480 min	

Skin protection

Cotton protective clothing (EN ISO 13688) and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. Wear suitable respiratory protection mask (EN 136:1998) with an AX-P2 combination filter (EN 14387:2004 +A1:2008).

Thermal hazards

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8.2.3. Environmental exposure controls

Substance/mixture related measures to prevent exposure

Use appropriate containers to avoid environmental contamination.

Technical measures to prevent exposure

Do not allow product to reach drains, sewage systems or ground water.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

-	Physical state:	liquid; aerosol
-	Colour:	light blue
-	Odour:	characteristic

Important health, safety and environmental information

-	pH	No information
-	Melting point/Freezing point	No information
-	Initial boiling point/boiling range	No information
-	Flashpoint	-40 °C (closed cup, calculated value)
-	Evaporation rate	No information
-	Ignition temperature	Flammable aerosol.
-	Explosion limits (vol%)	1,4 – 8 vol %
-	Vapour pressure	3000 – 4000 hPa at 20 °C
-	Vapour density	No information
-	Density	Density: 1,3 g/cm ³ at 20 °C
-	Solubility	No information
-	Partition coefficient	No information
-	Auto-ignition temperature	260 °C
-	Decomposition temperature	No information
-	Viscosity	No information
-	Explosive properties	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
-	Oxidising properties	No information

9.2. Other information

-	Remarks:	
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SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Risk of ignition.

10.2. Chemical stability

Product is stable under normal conditions according to handling and storage.

10.3. Possibility of hazardous reactions

There are no known hazardous reactions.

10.4. Conditions to avoid

Do not spray into open flame or incandescent material. Protect from heat, direct sunlight, open fire, free sparks. Containers may explode when exposed to heat for too long. Avoid shock and friction.

10.5. Incompatible materials

Not known.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

10.6. Hazardous decomposition products

Not known. Hazardous combustion products, see. Section 5 of the safety data sheet.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1.1. Acute toxicity

Additional information

As no toxicological data available on the mixture, the following assessment on toxicological effects has been made based on the data toxicology of the ingredients and according to their amount using the calculation methods. Not classified for acute toxicity.

11.1.2. Skin corrosion/irritation, serious eye damage/irritation

Additional information

The product is not classified as irritating to skin and eyes.

11.1.3. Respiratory or skin sensitisation

Additional information

Not classified as sensitizing.

11.1.4. Carcinogenicity, Mutagenicity, Reproductive toxicity

Carcinogenicity

No information

(Germ cell) mutagenicity

No information

Reproductive toxicity

No information

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

11.1.5. STOT - single and repeated exposure

Additional information

May cause drowsiness or dizziness. STOT RE (repeated exposure): not classified. Repeated exposure may cause skin dryness or cracking.

11.1.6. Aspiration hazard

Additional information

Aspiration hazard: Not Classified.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
1,1,1,2,3,3,3-heptafluoropropane (431-89-0)	EC ₅₀	> 200 mg/L	48 h	aquatic invertebrates			
	ErC ₅₀	> 114 mg/L	72 h	algae			
	EC ₅₀	> 173,1 mg/L	3 h	Microorganisms			
pentane (109-66-0)	LL ₅₀	27,55 mg/L	96 h	fish			
	EL ₅₀	48,11 mg/L	48 h	aquatic invertebrates			
	EC ₅₀	2,8 mg/L	48 h	aquatic invertebrates			

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

12.1.2. Chronic (long-term) toxicity

No information

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Organism	Rate	Time	Evaluation	Method	Remark
1,1,1,2,3,3,3-heptafluoropropane (431-89-0)	oxygen depletion	1 %	28 days			
pentane (109-66-0)	oxygen depletion	3 %	7 days			

12.3. Bioaccumulative potential

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	value	Temperature	pH	Concentration	Method
1,1,1,2,3,3,3-heptafluoropropane (431-89-0)	log Kow	2,289	25 °C	7		
pentane (109-66-0)	log Kow	3,45	25 °C	7		

12.3.2. Bioconcentration factor (BCF)

For components

Substance (CAS Nr.)	species	organism	value	Duration	Evaluation	Method	Remark
pentane (109-66-0)	BCF		171				

12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information

12.4.2. Surface tension

No information

12.4.3. Adsorption/Desorption

No information

12.5. Results of PBT and vPvB assessment

No evaluation.

12.6. Other adverse effects

No information

12.7. Additional information

For product

Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.

Water hazard class 2 (Self-assessment): hazardous for water.

Avoid release to the environment.

SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation Do not allow to enter sewers. Avoid release to the environment. Refer to special instructions / safety data sheet. Keep waste separate. Disposal must be made according to official regulations: to leave it to authorized collector/remover/transformer of hazardous waste.

Packaging

Dispose of in accordance with applicable waste disposal regulation. Unclean containers are classified as hazardous waste - should be handled the same as waste disposal. Emptied container is suitable for recycling. Pressurized container. Do not pierce or burn, even after use. Completely emptied containers leave to approved waste disposal authorities in charge.

13.1.2. Waste treatment-relevant information

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13.1.3. Sewage disposal-relevant information

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13.1.4. Other disposal recommendations

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SECTION 14. TRANSPORT INFORMATION

14.1. UN number

UN 1950

14.2. UN proper shipping name

AEROSOLS

14.3. Transport hazard class(es)

2

14.4. Packing group

not applicable

14.5. Environmental hazards

NO

14.6. Special precautions for user

Limited quantities

1 L

Tunnel restriction code

(D)

IMDG flashpoint

-40 °C, c.c.

IMDG EmS

F-D, S-U

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Goods may not be carried in bulk in bulk containers, containers or vehicles



SAFETY DATA SHEET according to Regulation 1907/2006

...continued from previous page

Product name: **Cerec Optispray 200ml**

Creation date: **29.6.2017** · Revision: **3.7.2017** · Version: **1**

SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Indication of changes

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Key literature references and sources for data

Safety data sheet, Cerec Optispray 200ml, 20.10.2016, version number: 1.0.

List of relevant H phrases

- H224 Extremely flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.