Dentsply Sirona

Safety Data Sheet

according to UK REACH Regulation

CEREC Optispray 50 mL

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

1.1. Product identifier

CEREC Optispray 50 mL

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

Use of the substance/mixture

Dusting agent (Aerosol)
Professional uses

1.3. Details of the supplier of the safety data sheet

Company name:	Sirona Dental Systems GmbH
Street:	Fabrikstraße 31
Place:	D-64625 Bensheim
Telephone:	+49 (0)625116-0
e-mail (Contact person):	http://srvcontact.sirona.com/webformulars/EntryPage
Internet:	www.dentsplysirona.com

1.4. Emergency telephone number:

GBK (24 h) +49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard categories:
Aerosol: Aerosol 3
Hazard Statements:
Pressurised container: May burst if heated.

2.2. Label elements

GB CLP Regulation

Signal word: Warning

Hazard statements

H229	Pressurised container: May burst if heated.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

2 % by mass of the contents are flammable.

2.3. Other hazards

not applicable: Bridging principle "Aerosols". (Data obtained by expert judgement./ Manufacturer)
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
Keep out of reach of children.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene			95 - <= 100 %
	471-480-0		01-0000019758-54	
	Liquefied gas; H280			
109-66-0	pentane			1 - < 5 %
	203-692-4	601-006-00-1		
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 EUH066			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
29118-24-9	471-480-0	trans-1,3,3,3-tetrafluoroprop-1-ene	95 - <= 100 %
	inhalation: LC50 = 207000 ppm (gases)		
109-66-0	203-692-4	pentane	1 - < 5 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

Not an irritant. In case of skin irritation, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

When in doubt or if symptoms are observed, get medical advice.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Hydrogen fluoride, Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Full protective suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Provide adequate ventilation. Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Ventilate affected area. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

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

Advice on safe handling

Do not pierce or burn, even after use. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Heating causes rise in pressure with risk of bursting.
Remove all sources of ignition. Do not spray on naked flames or any incandescent material.

Advice on general occupational hygiene

Do not breathe gas/fumes/vapour/spray. Do not breathe dust. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container.

Hints on joint storage

To follow: TRGS 510

Further information on storage conditions

Protect against direct sunlight. Keep away from heat.

7.3. Specific end use(s)

Dusting agent (Aerosol)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
-	Dust, inhalable	-	10		TWA (8 h)	WEL
-	Dust, respirable	-	4		TWA (8 h)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
109-66-0	Pentane	600	1800		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene		
Worker DNEL, long-term	inhalation	systemic	3902 mg/m³
Consumer DNEL, long-term	inhalation	systemic	830 mg/m³
109-66-0	pentane		
Consumer DNEL, long-term	oral	systemic	214 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	432 mg/kg bw/day
Consumer DNEL, long-term	dermal	systemic	214 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	3000 mg/m³
Consumer DNEL, long-term	inhalation	systemic	643 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene
Freshwater	0,1 mg/l
109-66-0	pentane
Freshwater	0,23 mg/l
Marine water	0,23 mg/l
Freshwater sediment	1,2 mg/kg
Marine sediment	1,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,6 mg/l
Soil	0,55 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Eye protection: not required.

Hand protection

Wear suitable gloves.

Suitable material: Butyl caoutchouc (butyl rubber), NBR (Nitrile rubber)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid (Aerosol)
Colour:	whitish
Odour:	characteristic
Odour threshold:	not determined

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	-16 °C
Flash point:	not determined

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

Heating causes rise in pressure with risk of bursting.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

The product is not: oxidising.

pH-Value:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Water solubility:	poorly soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure:	4192 hPa

Density:	1,25 g/cm³
Relative vapour density:	not determined

9.2. Other information

Other safety characteristics

Solvent content:	1,7 % (Substance, organic)
Solid content:	2,0 %
Evaporation rate:	not determined

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Aerosol, Heating causes rise in pressure with risk of bursting.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Protect against direct sunlight. Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Hydrogen fluoride, Pyrolysis products, toxic.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene				
	inhalation (4 h) gas	LC50 207000 ppm	Rat	Manufacturer	
109-66-0	pentane				
	oral	LD50 > 5000 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 5000 mg/kg	Rabbit	Manufacturer	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene					
	Acute crustacea toxicity	EC50 > 160 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
109-66-0	pentane					
	Acute crustacea toxicity	EC50 > 1 - < 10 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
29118-24-9	trans-1,3,3,3-tetrafluoroprop-1-ene	1,6
109-66-0	pentane	3,39

12.4. Mobility in soil

The product has not been tested.

Product is easily volatile.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

This material and its container must be disposed of in a safe way. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Contaminated packaging

Do not pierce or burn, even after use. Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2

Classification code:	5A
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	3
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2

Classification code:	5A
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2

Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0

EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS, NON-FLAMMABLE

14.3. Transport hazard class(es): 2.2

14.4. Packing group: -

Hazard label: 2.2

Special Provisions: A98 A145 A167 A802
Limited quantity Passenger: 30 kg G
Passenger LQ: Y203
Excepted quantity: E0
IATA-packing instructions - Passenger: 203
IATA-max. quantity - Passenger: 75 kg
IATA-packing instructions - Cargo: 203
IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Heating causes rise in pressure with risk of bursting.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 3, Entry 40

2010/75/EU (VOC): < 100 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Aerosol directive (75/324/EEC).
not applicable: Bridging principle "Aerosols". (Data obtained by expert judgement./ Manufacturer)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport 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 Harmonized 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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 3; H229	On basis of test data

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)