Printing date 05/19/2015

Version number 5

Reviewed on 03/05/2015

1 Identification

- · Product identifier
- · Trade name: ChemFil Rock Liquid
- · Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the mixture glass-ionomer cement
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

DENTSPLY DeTrey GmbH

De-Trey-Str. 1 D-78467 Konstanz **GERMANY**

Tel.: +49-(0)7531-583-0 Fax: +49-(0)7531-583-104

email: KonstanzDEU.info-sdb@dentsply.com

Supplier for CANADA: Dentsply Canada 161 Vinyl Court Woodbridge, ON L4L4A3

Tel.: (905) 851 6060 or 1-800-263-1437

Fax: (905) 851-9809

- · Information department:
- Departement Analytical Research for technical information
- Departement sales for distribution of the safety data sheets
- Emergency telephone number: +49-(0)7531-583-0 8:00 17:00 (GMT + 1:00)

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

STOT SE 3 H335 May cause respiratory irritation.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms





GHS05 GHS07

- · Signal word Danger
- · Hazard-determining components of labeling:

(+)-tartaric acid

Butanedioic acid, 2-methylene-, polymer with 2-propenoic acid

· Hazard statements

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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(Contd. of page 1)

Use only outdoors or in a well-ventilated area.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If skin irritation occurs: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

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

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system
- · NFPA ratings (scale 0-4)



Health = 1 Fire = 0Reactivity = 0

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

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

	· Dangerous components:			
I	, , , , , , , , , , , , , , , , , , ,	20-<25%		
l	♦ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335			
I	87-69-4 (+)-tartaric acid	5-<10%		
	♦ Eye Dam. 1, H318			

[·] Additional information For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- · Description of first aid measures
- · General information Immediately remove any clothing soiled by the product.
- · 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.
- · Information for doctor No further relevant information available.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents Water with full jet.
- · Special hazards arising from the substance or mixture No further relevant information available.

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Trade name: ChemFil Rock Liquid

(Contd. of page 2)

· Advice for firefighters

· Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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.

7 Handling and storage

- · Handling Product is intended for dental use only.
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Observe normal care for working with chemicals.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Not required.
- $\cdot \textit{Further information about storage conditions:} \textit{ Keep receptacle tightly sealed.}$
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components 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: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- · Breathing equipment: Not necessary if room is well-ventilated.
- · Protection of hands:



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Trade name: ChemFil Rock Liquid

(Contd. of page 3)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles.

· Body protection: Protective work clothing.

Information on basic physical and chemical properties				
General Information				
Appearance: Form:	Fluid			
Color:	Colorless			
Odor:	Acidic			
Odour threshold:	Not determined.			
pH-value:	Not determined.			
Change in condition				
Melting point/Melting range:	undetermined			
Boiling point/Boiling range:	Undetermined.			
Flash point:	Not applicable			
Flammability (solid, gaseous)	Not applicable.			
Ignition temperature:	Not applicable.			
Decomposition temperature:	Not determined.			
Auto igniting:	Product is not selfigniting.			
Danger of explosion:	Product does not present an explosion hazard.			
Explosion limits:				
Lower:	Not determined.			
Upper:	Not determined.			
Vapor pressure at 20 °C:	23 hPa			
Density:	Not determined			
Relative density	Not determined.			
Vapour density	Not determined.			
Evaporation rate	Not determined.			

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Trade name: ChemFil Rock Liquid

		(Contd. of page
Partition coefficient (n-octan	ol/water): Not determined.	
Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	0.0 %	
Water:	69.0 %	
Solids content:	8.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

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

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimates)

Oral LD50 25000 mg/kg

87-69-4 (+)-tartaric acid

Oral | *LD50* | >2000 mg/kg (rat)

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity:

87-69-4 (+)-tartaric acid

EC50/48h 93 mg/L (daphnia magna)

LC50/96h >100 mg/l (Fish acute toxicity study)

· Persistence and degradability No further relevant information available.

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Trade name: ChemFil Rock Liquid

(Contd. of page 5)

- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

4 Transport information		
· UN-Number · DOT, TDG, ADN, IMDG, IATA	Void	
· UN proper shipping name · DOT, TDG, ADN, IMDG, IATA	Void	
· Transport hazard class(es)		
· DOT, TDG, ADN, IMDG, IATA · Class	Void	
· Packing group · DOT, TDG, IMDG, IATA	Void	
· Environmental hazards:		
· Marine pollutant:	No	
· Special precautions for user	Not applicable.	
· Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
· UN "Model Regulation":	-	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Cancerogenity categories
- · TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

(Contd. on page 7)

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Trade name: ChemFil Rock Liquid

(Contd. of page 6)

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer.

For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

· Relevant phrases

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- · Department issuing MSDS: Analytical Research
- · Contact: HotLine for urgent technical support: +49-7531-583-350
- · Date of preparation / last revision 05/19/2015 / 4
- · Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
* Data compared to the previous version altered.

- CDN

Printing date 05/19/2015

Version number 5

Reviewed on 03/06/2015

1 Identification

- · Product identifier
- · Trade name: ChemFil Rock Powder
- · Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the mixture glass-ionomer cement
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

DENTSPLY DeTrey GmbH

De-Trey-Str. 1 D-78467 Konstanz GERMANY

Tel.: +49-(0)7531-583-0 Fax: +49-(0)7531-583-104

email: KonstanzDEU.info-sdb@dentsply.com

Supplier for CANADA: Dentsply Canada 161 Vinyl Court Woodbridge, ON L4L4A3

Tel.: (905) 851 6060 or 1-800-263-1437

Fax: (905) 851-9809

· Information department:

- Departement Analytical Research for technical information
- Departement sales for distribution of the safety data sheets
- Emergency telephone number: +49-(0)7531-583-0 8:00 17:00 (GMT + 1:00)

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS07

- · Signal word Warning
- · Hazard statements

Causes skin irritation.

Causes serious eye irritation.

· Precautionary statements

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

(Contd. on page 2)

(Contd. of page 1)

Safety Data Sheet acc. to OSHA HCS

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Trade name: ChemFil Rock Powder

· Classification system

· NFPA ratings (scale 0-4)



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

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

25948-33-8 Butanedioic acid, 2-methylene-, polymer with 2-propenoic acid

Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335

· Additional information For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- · Description of first aid measures
- · 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.
- · After swallowing If symptoms persist consult doctor.
- · Information for doctor No further relevant information available.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents Water with full jet.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- · 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.

CDN ·

Printing date 05/19/2015 Version number 5 Reviewed on 03/06/2015

Trade name: ChemFil Rock Powder

(Contd. of page 2)

7 Handling and storage

- · Handling Product is intended for dental use only.
- · Precautions for safe handling

Observe normal care for working with chemicals.

Thorough dedusting.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components 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: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- · Breathing equipment: Not necessary if room is well-ventilated.
- · Protection of hands:



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

· **Body protection:** Protective work clothing.

CDN

Printing date 05/19/2015 Version number 5 Reviewed on 03/06/2015

Trade name: ChemFil Rock Powder

(Contd. of page 3)

Information on basic physical and	chemical properties			
· General Information				
Appearance:				
Form:	Solid.			
Color:	According to product specification			
Odor:	Odorless			
Odour threshold:	Not determined.			
pH-value:	Not applicable.			
Change in condition				
Melting point/Melting range:	undetermined			
Boiling point/Boiling range:	Undetermined.			
Flash point:	Not applicable			
Flammability (solid, gaseous)	Not determined.			
Ignition temperature:	Not applicable.			
Decomposition temperature:	Not determined.			
Auto igniting:	Product is not selfigniting.			
Danger of explosion:	Product does not present an explosion hazard.			
Explosion limits:				
Lower:	Not determined.			
Upper:	Not determined.			
Vapor pressure at 20 °C:	23 hPa			
Density:	Not determined			
Relative density	Not determined.			
Vapour density	Not applicable.			
Evaporation rate	Not applicable.			
Solubility in / Miscibility with				
Water:	Insoluble			
Partition coefficient (n-octanol/wat	er): Not determined.			
Viscosity:				
dynamic:	Not applicable.			
kinematic:	Not applicable.			
Solvent content:				
Organic solvents:	0.0 %			
Solids content:	100.0 %			
· Other information	No further relevant information available.			

10 Stability and reactivity

- $\cdot \textit{Reactivity No further relevant information available}.$
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known

Printing date 05/19/2015 Version number 5 Reviewed on 03/06/2015

Trade name: ChemFil Rock Powder

(Contd. of page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: may cause skin irritation
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, TDG, ADN, IMDG, IATA Void
- · UN proper shipping name
- · DOT, TDG, ADN, IMDG, IATA Void

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Trade name: ChemFil Rock Powder

		(Contd. of page 5)
· Transport hazard class(es)		
· DOT, TDG, ADN, IMDG, IATA · Class	Void	
· Packing group · DOT, TDG, IMDG, IATA	Void	
· Environmental hazards: · Marine pollutant:	No	
· Special precautions for user	Not applicable.	
· Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
· UN ''Model Regulation'':	-	

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Cancerogenity categories
- · TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer.

For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

Relevant phrases

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- · Department issuing MSDS: Analytical Research
- · Contact: HotLine for urgent technical support: +49-7531-583-350
- · Date of preparation / last revision 05/19/2015 / 4
- · Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

* * Data compared to the previous version altered.