Safety Data Sheet
acc. to OSHA HCS

Printing date 09/24/2021 Reviewed on 09/24/2021

1 Identification

· **Product identifier**

· **Trade name: Permaflo™ DC Base**

· **Article number:** SDS 45-001.10, 63594, 63544, 63592, 63593
· **Application of the substance / the mixture** Professional Dental Restorative Material

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Ultradent Products Inc.
505 W. Ultradent Drive (10200 S)
South Jordan, UT 84095-3942
USA
onlineordersupport@ultradent.com

· **Information department:** Customer Service
· **Emergency telephone number:**
CHEMTREC (NORTH AMERICA) :(800) 424-9300
(INTERNATIONAL) : +(703) 527-3887

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** GHS07, GHS08
· **Signal word** Warning

· **Health Hazard-determining components of labeling:**
Triethylene Glycol Dimethacrylate
Benzoyl Peroxide
· **Hazard statements**
Harmful if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer. Route of exposure: Inhalation.
· **Precautionary statements**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well-ventilated area.

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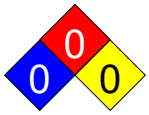
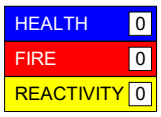
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

3 Composition/information on ingredients

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

· **Dangerous components:**

109-16-0	Triethylene Glycol Dimethacrylate Skin Sens. 1, H317	>10-≤25%
	Trade Secret Alternative CAS number: 7631-86-9	≥0-≤10%
94-36-0	Benzoyl Peroxide Org. Perox. B, H241; Eye Irrit. 2A, H319; Skin Sens. 1, H317	≥0.1-<1%
13463-67-7	Titanium Dioxide Carc. 2, H351	≥0.1-<25%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
This product is a viscous gel, therefore chance of inhalation is extremely low.
Seek medical treatment in case of complaints.
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
If skin irritation continues, consult a doctor.

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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:**
· **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:**
Foam, dry chemical, carbon dioxide
Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Mouth respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** 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:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **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:**
Protect from heat
See product labelling.
Protect from exposure to the light.
Keep receptacle tightly sealed.

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· **Specific end use(s)** Professional Dental Restorative Material

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 following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

Trade Secret	
TWA	Short-term value: 0.8 mg/m³
13463-67-7 Titanium Dioxide	
ACGIH TLV	Short-term value: 10* 5 mg/m³
PEL	Long-term value: 15* mg/m³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m³
TWA	Short-term value: 15* 5 mg/m³

· **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.
Store protective clothing separately.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **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 is based on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of 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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Goggles recommended during refilling.

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· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Gel
Color:	According to product specification
· **Odor:**	Acrylic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable (non-aqueous)
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined
· **Flash point:**	Not applicable
· **Flammability (solid, gaseous):**	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:**	Not determined.
· **Density at 20 °C:**	1.8-2.1 g/cm³
· **Relative density**	Not determined
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined
· **Solvent content:**	
VOC content:	≤0.13 % 2.3-≤2.7 g/l / 0.02 lb/gal
VOC (EC)	≤0.13 %
Solids content:	<80.0 %
· **Other information**	No further relevant information available.

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10 Stability and reactivity

· **Reactivity** Polymerization occurs when exposed to amine catalysts, metal, or pressure.
· **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** Visible light, ultraviolet light, and extreme heat
· **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:**		
109-16-0 Triethylene Glycol Dimethacrylate		
Oral	LD50	>5,000 mg/kg (rat)
	LC50 Fish	16.4 mg/l (Fish) (Toxicity to fish)
Dermal	LD50	>2,000 mg/kg (mouse)
Trade Secret		
Oral	LD50	>15,000 mg/kg (mouse)
		>3,300 mg/kg (rat)
	LC50 Fish	>10,000 mg/l (Fish) (Toxicity to fish)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.139 mg/l (rat)
94-36-0 Benzoyl Peroxide		
Oral	LD50	>5,000 mg/kg (rat)
	LC50 Fish	0.0602 mg/l (Fish) (Toxicity to fish)
Inhalative	LD50 Inhalation 4hrs	24.3 mg/l (rat) (Testing of Chemicals Acute Toxicity Inhalation)
13463-67-7 Titanium Dioxide		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
94-36-0	Benzoyl Peroxide	3
64-17-5	Ethyl Alcohol	1
128-37-0	Butylated Hydroxytoluene	3
68187-11-1	Co-Cr-AL Spinel Blue Green	2B

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14808-60-7	Silica Glass	1

· **NTP (National Toxicology Program)**

14808-60-7	Silica Glass	K

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

109-16-0 Triethylene Glycol Dimethacrylate	
EC50	>100 mg/kg (Algae)
Biodegradability	28 days (Aerobic) (Biodegradability testing)
Aqua toxicity	32 mg/l (daphnia) (No Observed Effect Concentration)
Trade Secret	
EC50	>1,000 mg/kg (daphnia)
94-36-0 Benzoyl Peroxide	
Algae Toxicity	0.0711 mg/l (Algae) (Toxicity to algae) 0.11 mg/l (daphnia) (Toxicity to aquatic invertebrates)
13463-67-7 Titanium Dioxide	
EC50	>100 mg/kg (Algae) >1,000 mg/kg (Fish)

· **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:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
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:**
Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

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14 Transport information

· **UN-Number**	
· **DOT, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name**	
· **DOT, ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es)**	
· **DOT, ADN, IMDG, IATA**	
· **Class**	Not Regulated
· **Packing group**	
· **DOT, IMDG, IATA**	Not Regulated
· **Environmental hazards:**	Not Applicable.
· **Special precautions for user**	Not Applicable
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not Applicable.
· **UN "Model Regulation":**	Not Regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

1344-28-1	Aluminium Oxide
94-36-0	Benzoyl Peroxide
68187-11-1	Co-Cr-AL Spinel Blue Green

· **TSCA (Toxic Substances Control Act):**

109-16-0	Triethylene Glycol Dimethacrylate	ACTIVE
94-36-0	Benzoyl Peroxide	ACTIVE
13463-67-7	Titanium Dioxide	ACTIVE

· **Hazardous Air Pollutants**

68187-11-1	Co-Cr-AL Spinel Blue Green

· **Proposition 65**

· **Chemicals known to cause cancer:**

14808-60-7	Silica Glass

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5	Ethyl Alcohol

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **ACGIH Carcinogenicity (American Conference of Governmental Industrial Hygienists)**		
1344-28-1	Aluminium Oxide	A4
94-36-0	Benzoyl Peroxide	A4
64-17-5	Ethyl Alcohol	A3
128-37-0	Butylated Hydroxytoluene	A4
14808-60-7	Silica Glass	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
14808-60-7	Silica Glass

· **Chemical safety assessment:**
Device is biocompatible when used as directed by dental professionals per ISO 10993-1

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.

· **Department issuing SDS:** Environmental, Health, and Safety
· **Contact:** Customer Service
· **Date of preparation / last revision** 09/24/2021 / -
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Org. Perox. B: Organic peroxides – Type B
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2