

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

071709294

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

071708908 071708916

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

071707587 071707595 071707603 071707611 071707629 071707637 071707645 071707652 071707660 071707678  
071708221 071708239 071708247 071708254 071708262 071708270 071708288 071708296 071708304 071708312  
071708320 071708338 071708346 071708353 071708361 071708379 071708387 071708395 071708403 071708411  
071708429 071708437 071708445 071708452 071708460 071708478 071708486 071708494 071708502 071708510  
071708528 071708536 071708924 071708932 071708940 071708957 071708965 071708973 071708981 071708999  
071709005 071709013 071709021 071709153 071709161 071709179 071709187 071709195 071709203 071709211  
071709229 071709245 071709252 071709260 071709278 071709286 071709302 071709310 071709328 071709336  
071709344 071709351 071709369 071709377 071709534 071709542 071709559 071709567 071709575 071709583  
071709591 071709609 071709617 071709625 071709633 071709641 071709658 071709666 071709674 071709682  
071709690 071709708 071709716 071709724 071709732 071709740 071709757 071709765 071709773 071709781  
071709799 071709807 071709815 071709823 071709831 071709849

# Dentsply EsthetX HD

Dentsply (Australia)

Chemwatch Hazard Alert Code: 3

Chemwatch: 22-5368

Issue Date: 01/01/2013

Version No: 2.1.1.1

Print Date: 15/10/2014

Material Safety Data Sheet according to NOHSC and ADG requirements

Initial Date: Not Available

S.Local.AUS.EN

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

### Product Identifier

Product name	Dentsply EsthetX HD
Chemical Name	Not Applicable
Synonyms	EsthetX HD, EsthetX HD High Definition Micro Matrix Restorative
Proper shipping name	Not Applicable
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Light curing composite/dental filling material
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### Details of the manufacturer/importer

Registered company name	Dentsply (Australia)
Address	11-21 Gilby Road Mount Waverley 3149 VIC Australia
Telephone	+61 3 9538 8240
Fax	+61 3 9538 8260
Website	www.dentsply.com.au
Email	Not Available

### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	1300 552 929 (Mon-Fri 9am-5pm)
Other emergency telephone numbers	1300 552 929 (Mon-Fri 9am-5pm)

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

#### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	0	
Toxicity	2	
Body Contact	2	
Reactivity	1	
Chronic	3	

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

Poisons Schedule	Not Applicable
Risk Phrases [1]	<b>R20/22</b> Harmful by inhalation and if swallowed.
	<b>R36/38</b> Irritating to eyes and skin.
	<b>R50/53</b> Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Continued...

## Dentsply EsthetX HD

	<b>R43</b>	May cause SENSITISATION by skin contact.
	<b>R40(3)</b>	Limited evidence of a carcinogenic effect.
	<b>R61(1)</b>	May cause harm to the unborn child.
	<b>R33</b>	Danger of cumulative effects.
	<b>R62(3)</b>	Possible risk of impaired fertility.
	<b>R48/20 /21/22</b>	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

**Legend:**

1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI



Relevant risk statements are found in section 2

<b>Indication(s) of danger</b>	T, Xn, N
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### SAFETY ADVICE

<b>S01</b>	Keep locked up.
<b>S07</b>	Keep container tightly closed.
<b>S09</b>	Keep container in a well ventilated place.
<b>S13</b>	Keep away from food, drink and animal feeding stuffs.
<b>S20</b>	When using do not eat or drink.
<b>S25</b>	Avoid contact with eyes.
<b>S26</b>	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
<b>S28</b>	After contact with skin, wash immediately with plenty of water
<b>S29</b>	Do not empty into drains.
<b>S35</b>	This material and its container must be disposed of in a safe way.
<b>S36</b>	Wear suitable protective clothing.
<b>S37</b>	Wear suitable gloves.
<b>S38</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>S39</b>	Wear eye/face protection.
<b>S40</b>	To clean the floor and all objects contaminated by this material, use water and detergent.
<b>S45</b>	In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
<b>S46</b>	If swallowed, seek medical advice immediately and show this container or label.
<b>S51</b>	Use only in well ventilated areas.
<b>S53</b>	Avoid exposure - obtain special instructions before use.
<b>S56</b>	Dispose of this material and its container at hazardous or special waste collection point.
<b>S57</b>	Use appropriate container to avoid environmental contamination.
<b>S61</b>	Avoid release to the environment. Refer to special instructions/Safety data sheets.
<b>S64</b>	If swallowed, rinse mouth with water (only if the person is conscious).

### Other hazards

	May produce discomfort of the respiratory system*.
	Possible respiratory sensitizer*.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

Continued...

## Dentsply EsthetX HD

CAS No	%[weight]	Name
65997-17-3	<50	<a href="#">glass fibres loose - special purpose</a>
65997-18-4	<30	<a href="#">frits chemicals, lead containing</a>
109-16-0	<20	<a href="#">triethylene glycol dimethacrylate</a>
Not Available	<10	urethane modified bis-GMA dimethacrylate
68611-44-9	<5	<a href="#">silica amorphous, fumed</a>
7631-86-9	<5	<a href="#">silica amorphous</a>

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<ul style="list-style-type: none"> <li>▶ Gently brush or vacuum off adherent fibres.</li> <li>▶ Wash affected areas thoroughly with water (and soap if available).</li> <li>▶ Seek medical attention if irritation exists and persists.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> <li>▶ If dust is inhaled, remove from contaminated area.</li> <li>▶ Encourage patient to blow nose to ensure clear breathing passages.</li> <li>▶ Ask patient to rinse mouth with water but to not drink water.</li> <li>▶ Seek immediate medical attention.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

## Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Mineral fibres are a mechanical irritant, and are not expected to produce any chronic health effects from acute exposures.

Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Lung function should be monitored, periodically, in individuals chronically exposed to fibres in an occupational setting

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

	<ul style="list-style-type: none"> <li>▶ Water spray or fog.</li> <li>▶ Alcohol stable foam.</li> <li>▶ Dry chemical powder.</li> <li>▶ Carbon dioxide.</li> </ul>
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## Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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## Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.</li> <li>▶ When heated to extreme temperatures, (&gt;1700 deg.C) amorphous silica can fuse.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> </ul>
<b>Fire/Explosion Hazard</b>	Mineral fibres exhibit low thermal conductivity, low heat storage, and thermal shock resistance. In fire situations they withstand high temperatures without burning. Thermal decomposition is associated with polymeric binders and facings which may be present in the article. The packaging, facings and resin may smoulder, decompose or burn.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Dentsply EsthetX HD

## Personal precautions, protective equipment and emergency procedures

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid contact with skin and eyes.</li> <li>▶ Wear impervious gloves and safety goggles.</li> <li>▶ Trowel up/scrape up.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> </ul>
Personal Protective Equipment advice is contained in Section 8 of the MSDS.	

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Limit all unnecessary personal contact.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ <b>When handling DO NOT eat, drink or smoke.</b></li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> </ul>

## Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>

## PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	silica amorphous	Silica - Amorphous Fumed silica (respirable dust) / Fumed silica (respirable dust)	2 mg/m3	Not Available	Not Available	Not Available

## EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
Dentsply EsthetX HD	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
glass fibres loose - special purpose	Not Available	Not Available
frits chemicals, lead containing	700 mg/m3	100 mg/m3
triethylene glycol dimethacrylate	Not Available	Not Available
urethane modified bis-GMA dimethacrylate	Not Available	Not Available
silica amorphous, fumed	N.E. mg/m3 / N.E. ppm	3,000 mg/m3
silica amorphous	N.E. mg/m3 / N.E. ppm	3,000 mg/m3

## Exposure controls

<b>Appropriate</b>	<ul style="list-style-type: none"> <li>▶ Provide good ventilation (either forced or natural)</li> </ul>
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## Dentsply EsthetX HD

<b>engineering controls</b>	<ul style="list-style-type: none"> <li>▶ Where possible, enclose sources of dust and provide dust extraction at the source.</li> <li>▶ Restrict access to work areas involved in handling man-made mineral fibres and ensure that adequate training, in the handling of such materials, has been provided.</li> <li>▶ Use operating procedures which limit the generation of dusts.</li> <li>▶ When working with unbonded fibres, local exhaust ventilation is generally a requirement.</li> </ul>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> <p>Wear protective gloves, e.g. PVC.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Disposable coveralls or long sleeve, loose fitting protective clothing, e.g. overalls (launder clothing separately from other clothing).</li> <li>▶ When working above head height, use head covering.</li> <li>▶ Minimise dust generation by using sharp hand cutting tools if possible.</li> <li>▶ Powered tools (e.g. saws etc.) should only be used if fitted with dust extraction and containment equipment.</li> </ul>
<b>Thermal hazards</b>	Not Available

## Recommended material(s)

## Respiratory protection

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the

**computer-generated** selection:

Dentsply EsthetX HD Not Available

Material	CPI
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\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

<b>Appearance</b>	Various shades of viscous paste with a characteristic sweet acrylic odour; does not mix with water.		
<b>Physical state</b>	Non Slump Paste	<b>Relative density (Water = 1)</b>	2.1
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Available

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<b>Flash point (°C)</b>	Not Available	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Available	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Immiscible	<b>pH as a solution(1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	<p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs.</p>
<b>Ingestion</b>	<p>The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).</p>
<b>Skin Contact</b>	<p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p>
<b>Eye</b>	<p>Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.</p> <p>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p>
<b>Chronic</b>	<p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure.</p>

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<b>Dentsply EsthetX HD</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>glass fibres loose - special purpose</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>frits chemicals, lead containing</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>triethylene glycol dimethacrylate</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (mouse) LD50: 10750 mg/kg	
	Oral (rat) LD50: 10837 mg/kg	
	Not Available	Not Available
<b>silica amorphous, fumed</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: >5000 mg/kg	[Wacker]
	Not Available	Not Available
<b>silica amorphous</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >5000 mg/kg *	* [Grace]
	Inhalation (rat) LC50: >0.139 mg/l/14h *	Eye (rabbit): non-irritating *
	Oral (rat) LD50: 3160 mg/kg	Skin (rabbit): non-irritating *
	Not Available	Not Available

\* Value obtained from manufacturer's msds

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

<b>GLASS FIBRES LOOSE - SPECIAL PURPOSE</b>	<p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. For fibre glass wool: In October 2001, IARC classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans." The 2001 decision was based on current human and animal research that shows no association between inhalation exposure to dust from fibre glass wool and the development of respiratory disease. This is a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of fiber glass. NTP and ACGIH have not yet reviewed the IARC reclassification or the most current fibre glass health research; at this time, both agencies continue to classify glass wool based on the earlier animal injection studies.</p> <p>MMMF are manufactured to definite fibre diameters and cannot split along their length rather they break across and form small particles not needles [FARIMA]. NOTE: Carcinogenic by RTECS criteria (rat inhalation studies). Equivocal carcinogen or neoplastic agent by RTECS criteria (rat implantation studies)</p>		
<b>FRITS CHEMICALS, LEAD CONTAINING</b>	No significant acute toxicological data identified in literature search.		
<b>SILICA AMORPHOUS</b>	Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible. [PATTYS]		
<b>Dentsply EsthetX HD, TRIETHYLENE GLYCOL DIMETHACRYLATE</b>	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.		
<b>SILICA AMORPHOUS, FUMED, SILICA AMORPHOUS</b>	For silica amorphous: When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated. If swallowed, the vast majority of SAS is excreted in the faeces and there is little accumulation in the body. Following absorption across the gut, SAS is eliminated via urine without modification in animals and humans. SAS is not expected to be broken down (metabolised) in mammals.		
<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	✓
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✓

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## Dentsply EsthetX HD

Serious Eye Damage/Irritation	✓	STOT - Single Exposure	⊘
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✓
Mutagenicity	⊘	Aspiration Hazard	⊘

Legend: ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

## CMR STATUS

Not Applicable

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

**DO NOT discharge into sewer or waterways.**

Prevent, by any means available, spillage from entering drains or water courses.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylene glycol dimethacrylate	HIGH	HIGH
silica amorphous	HIGH	HIGH

## Bioaccumulative potential

Ingredient	Bioaccumulation
triethylene glycol dimethacrylate	LOW (BCF = 5.592)
silica amorphous	LOW (BCF = 3.162)

## Mobility in soil

Ingredient	Mobility
triethylene glycol dimethacrylate	LOW (KOC = 10)
silica amorphous	LOW (KOC = 23.74)


## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> </ul> Otherwise: <ul style="list-style-type: none"> <li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>Where possible retain label warnings and MSDS and observe all notices pertaining to the product.</li> </ul>
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## SECTION 14 TRANSPORT INFORMATION

## Labels Required

Marine Pollutant	
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

## SECTION 15 REGULATORY INFORMATION

Continued...

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

<b>glass fibres loose - special purpose(65997-17-3) is found on the following regulatory lists</b>	"Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>frits chemicals, lead containing(65997-18-4) is found on the following regulatory lists</b>	"Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>triethylene glycol dimethacrylate(109-16-0) is found on the following regulatory lists</b>	"Australia Inventory of Chemical Substances (AICS)"
<b>silica amorphous, fumed(68611-44-9) is found on the following regulatory lists</b>	"Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>silica amorphous(7631-86-9) is found on the following regulatory lists</b>	"Australia Exposure Standards", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"

**SECTION 16 OTHER INFORMATION****Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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ACTIO MSDS ID: 956705

View Section : 12345678910111213141516

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION 530699

Product Name: EsthetX HD

Synonyms: EsthetX« HD  
High Definition Micro Matrix Restorative  
CAS Number: Not Applicable  
Manufacturer MSDS.: 530699

Manufacturer Name: Dentsply/Caulk

Address: 38 West Clarke Avenue  
Milford DE 19963-1805

Emergency Telephone Number:  
(302) 422-4511 (8:00 AM - 4:30 PM Eastern Time)

<http://www.caulk.com>

General Use: (For Canada): Light Curing Composite/Dental Filling Material

Business Phone: (302) 422-4511  
Hours Of Operation: (8:00 AM - 4:30 PM Eastern Time)  
Revision Date: 06/03/08  
Trade Names: EsthetX« HD  
High Definition Micro Matrix Restorative  
NFPA Hazard Classification Ratings (Scale 0-4)

DENTSPLY/International

Chemical Name: Dimethacrylate Resins

Grades or Minor Variant Identities:  
Compules« and EasyoTwist Syringe  
NFPA

1  
10  
0

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS530699

Ingredient NameCAS#Ingredient Percent

Hydrophobic Amorphous Fumed Silica 68611-44-9< than 5%

Hazardous:Yes

EC Index Number:1

Other Exposure Guidelines:10 mg/m3

Silica (Amorphous) 67762-90-7< than 5%

Hazardous:Yes

EC Index Number:1

Other Exposure Guidelines:3 mg/m3

Barium boron fluoro alumino silicate glass 65997-18-4< than 30%

Hazardous:Yes

EC Index Number:1

Other Exposure Guidelines:10 mg/m3

Barium boron alumino silicate glass 65997-17-3< than 50%

Hazardous:Yes

EC Index Number:1

Other Exposure Guidelines:10 mg/m3

Urethane modified Bis-GMA dimethacrylate 126646-17-1< than 10%

Hazardous:Yes

EC Index Number:1

Other Exposure Guidelines:Not Established

Polymerizable dimethacrylate resins 109-16-0

Hazardous:Yes

EC Index Number:1

Polymerizable dimethacrylate resins 24448-20-2

Hazardous:Yes

EC Index Number:1

Composition/Information:Hazardous Components: Polymerizable dimethacrylate resins  
C.A.S. Number: 24448-20-2/109-16-0  
Exposure Limits: Not Established  
Total % : < than 20  
Other Information: Colorants are inorganic iron oxides and titanium dioxide.

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### SECTION 3 : HAZARDS IDENTIFICATION530699

Emergency Overview:Material is irritating to eyes, respiratory system and skin.

Applies to All Ingredients :

Route of Exposure:Eye, Skin, Inhalation, Ingestion

Potential Health Effects:Acute:

Other: Not Applicable

Eye Contact:Acute: Irritation and possible corneal damage

Skin Contact:Acute: Irritation or possible allergic response. Severe allergic response may result in breathing difficulties.

Inhalation:Acute: Not Applicable

Ingestion:Acute: Not Applicable

Chronic Health Effects:Other: Not Applicable

Chronic Eye Contact:Irritation and possible corneal damage

Chronic Skin Contact:Irritation or possible allergic response.

Severe allergic response may result in breathing difficulties.

Chronic Inhalation:Not Applicable

Chronic Ingestion:Not Applicable

Carcinogenicity:OSHA regulated: No All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

NTP Designation:Not listed

IARC Designation:Monographs: Not listed

Target Organs:Eye: Not Applicable

Skin: Not Applicable

Inhalation: Not Applicable

Ingestion: Not Applicable

Other: Not Applicable

Signs/Symptoms:Eye: Material can cause irritation.

Skin: Material may be an irritant

Inhalation: Not Applicable

Ingestion: Material is probably not harmful if swallowed

Other: Not Applicable

Aggravation of Pre-Existing Conditions:Open sores and wounds of the

skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylate resin used in Dental restorative products.

Single, Repeated, or Lifetime Exposure:

Eye: Single

Skin: Single & Repeated

Inhalation: Not Applicable

Ingestion: Not Applicable

Other: Not Applicable

Severity (Mild, Moderate, Severe):

Eye: Moderate

Skin: Moderate

Inhalation: Not Applicable

Ingestion: Not Applicable

Other: Not Applicable

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

NFPA Hazard Classification Ratings (Scale 0-4):

Health = 1

Fire = 1

Reactivity = 0

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#### SECTION 4 : FIRST AID MEASURES530699

Eye Contact:First Aid Instructions: Rinse opened eye for several minutes under running water. If symptoms persist consult physician

Immediate Medical Attention: Not Applicable

Delayed Effects: Not Applicable

Skin Contact:First Aid Instructions: Immediately wash with soap and water and rinse thoroughly

Immediate Medical Attention: Not Applicable

Delayed Effects: Not Applicable

Inhalation:First Aid Instructions: Supply fresh air, consult physician if symptoms persist

Immediate Medical Attention: Not Applicable

Delayed Effects: Not Applicable

Ingestion:First Aid Instructions: If symptoms persist consult physician

Immediate Medical Attention: Not Applicable

Delayed Effects: Not Applicable

Note to Physicians:(Treating, Testing and Monitoring): Not Applicable

Other First Aid:First Aid Instructions: Not Applicable

Immediate Medical Attention: Not Applicable

Delayed Effects: Not Applicable

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#### SECTION 5 : FIRE FIGHTING MEASURES530699

Flash Point Method:Not Applicable

Upper Flammable or Explosive Limit:In Air: Not Applicable  
Lower Flammable or Explosive Limit:In Air: Not Applicable  
Auto Ignition Temperature:Not Applicable Product will not autoignite.  
Flammability Class:Not Applicable  
Extinguishing Media:CO2, extinguishing powder, foam carbon dioxide or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Unsuitable Media:Water with full jet.  
Flame Propagation in Air:Flame Propagation or Burning Rate (for Solids): Not Applicable  
Fire Fighting Instructions:For Firefighters: Firefighters should wear self-contained respiratory protective devices.  
Unusual Fire Hazards:Formation of toxic, irritating gases is possible from the decomposition of the dimethacrylate resins. Product does not present an explosion hazard.  
Other: Not Applicable

Properties Contributing to Fire Intensity: Not Applicable

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#### SECTION 6 : ACCIDENTAL RELEASE MEASURES530699

Spill Cleanup Measures:Containment Techniques: Material is a paste and as such will not flow.

Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing and scoop up bulk material and place in a labeled plastic or metal container.

Avoid gross skin contact to minimize the possibility of contact dermatitis to susceptible persons. Ensure adequate ventilation.

Evacuation Procedures: Not Applicable

Special Instructions: Not Applicable

Reporting Requirements: Not Applicable

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#### SECTION 7 : HANDLING and STORAGE530699

Handling:Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.

Storage:Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a dry area. Protect from exposure to direct light. Store away from food and beverages.

Hygiene Practices:Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION530699

Ventilation System:None required during normal intended use of this product  
Skin Protection Description:The glove material has to be impermeable and resistant to the product.  
Eye/Face Protection:Safety Glasses  
Protective Clothing/Body Protection:Body Protection:  
Protective work clothing  
Respiratory Protection:Inhalation: Not Required  
Other Protective:Equipment: Not Applicable  
Emergency Skin Protection:Not Applicable  
Emergency Eye/Face Protection:Not Applicable  
Emergency Clothing/Body Protection:Body Protection: Not Applicable  
Emergency Respiratory Protection:Inhalation: Not Applicable  
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES530699

Physical State/Appearance:Various shades of viscous paste.  
Odor:Characteristic sweet acrylic ester odor.  
Physical State:Normal Physical State: Very High Viscosity Liquid (Paste)  
pH:Not Applicable  
Vapor Pressure:(mm Hg): Not Applicable  
Vapor Density:(AIR = 1): Not Applicable  
Melting Point:Not Applicable  
Solubility:In Water: Not soluble  
Specific Gravity:2.1 g/cm<sup>3</sup>  
Evaporation Point:(Butyl Acetate = 1): Not Applicable  
Other:Not Applicable

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SECTION 10 : STABILITY and REACTIVITY530699

Chemical Stability:Stable.  
Conditions to Avoid:None known.  
Incompatibilities with Other Materials:(Materials to Avoid) Strong Oxidizing materials.  
Hazardous Polymerization:May Not Occur  
Conditions to Avoid: None known



Hazardous Decomposition Products:No dangerous decomposition products known if used according to Directions for Use.

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SECTION 11 : TOXICOLOGICAL INFORMATION530699

Toxicological Paragraph:Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product is an irritant to the skin and mucous membranes. The unpolymerized product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Sensitization: Repeated or prolonged contact with the unpolymerized material may cause sensitization for persons allergic to acrylates and methacrylates. This product shows the following dangers according to internally approved calculation methods for composite materials: Irritant.

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SECTION 12 : ECOLOGICAL INFORMATION530699

Ecological Paragraph:Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class1 (Self-assessment): Slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water streams or sewage system.

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SECTION 13 : DISPOSAL CONSIDERATIONS530699

Waste Disposal:Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Dispose of material as solid waste in a closed container.  
Dispose of in accordance with Federal, State and Local regulations  
Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

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SECTION 14 : TRANSPORT INFORMATION530699

DOT Shipping Information:Regulated for Shipping: No. Not Regulated

Do Changes in Quantities, packaging, or shipment method change product classification: No

Other: Not Applicable

DOT Shipping Name:Regul and for Shipping: No. Not Regulated

DOT UN Number:Not Applicable

DOT Hazard Class:Not Applicable

DOT Packing Group:Not Applicable

DOT Subpart E Labeling Requirement:(49CFR172.101): Not Applicable

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## SECTION 15 : REGULATORY INFORMATION530699

Applies to all ingredients:

TSCA 8(b): Inventory Status:EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

CERCLA Section 103:U.S. Federal Regulations: CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

Section 302 Extremely Hazardous Substances (TPQ):None

Section 313 Toxic Release Form:Section 313 Toxic Chemicals:

This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

State:U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.

Canada WHMIS:International Regulations: Canadian Environmental Protection Act:

This product is a medical device and not subject to chemical notification requirements.

European Community Chemical Inventory Status:European Community Labeling: Not a dangerous preparation.

European Inventory of New and Existing Chemicals Substances (EINECS):

This product is a medical device and not subject to chemical notification requirements.

Other: Not Applicable

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## SECTION 16 : ADDITIONAL INFORMATION530699

NFPA:

Health:1

Fire Hazard:1

Reactivity:0

MSDS Revision Date:06/03/08

Disclaimer:

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex. All components are synthetically produced; none are derived from animal products.

NFPA Hazard Classification Ratings (Scale 0-4)

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