SAFETY DATA SHEETS

This SDS packet was issued with item:

072767184

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).

072767143 072767168 072767176 072767192 072767200

DENTSPLY International
DENTSPLY PROSTHETICS

Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

Date Issued: 19 July 2005
Document Number: 100
Date Revised: 20 December 2011
Revision Number: 4

1. PRODUCT IDENTIFICATION

Trade Name (as labeled):	**Triad® Gel**
Product Identifier (Part/Item Number):	**88859, 88860, 88750, 88751, 88762**
U.N. Number:	**Not Regulated**
U.N. Dangerous Goods Classification:	**Not Regulated**
Recommended Use:	**Resin used in removable dental appliances**
Restrictions on Use:	**For Professional Use Only**
Manufacturer/Supplier Name:	**Dentsply Prosthetics**
Manufacturer/Supplier Address:	**570 West College Ave.**
	York, PA 17405-0872
Manufacturer/Supplier Telephone Number:	**717-845-7511 (Product Information)**
Emergency Contact Telephone Number:	**800-424-9300 Chemtrec**
Email address:	**Prosthetics_MSDS@Dentsply.com**

2. HAZARD(s) IDENTIFICATION

EU Classification (1999/45/EC): Irritant (Xi)

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

Labeling in accordance with 1999/45/EC:

Irritant

R36/38 Irritating to eyes and skin
R43 May cause sensitization by skin contact.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.

US Hazard Classification: Hazardous

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. #	EINECS #	Substance Classification	WT %
Aliphatic Urethane Methacrylate	Proprietary	Proprietary	Xi R36/38, R43	80-100%
Amorphous Precipitated Silica	112945-52-5	231-545-4	Not Applicable	1-10%

Refer to Section 16 for the full text of the GHS and H phrases and EU Classifications and R Phrases.

4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Immediately flush with water for 15 minutes. Get medical attention.
Skin	Remove contaminated clothing. Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation	If irritation develops, remove to fresh air. Get medical attention if symptoms persist.
Ingestion	If swallowed, wash mouth with water. DO NOT induce vomiting. Get medical attention.
Most important symptoms of exposure	May cause eye and skin irritation. May cause skin sensitization.
Note to Physicians (Treatment, Testing, and Monitoring): Treat symptomatically.	

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use water fog, foam, carbon dioxide, water spray or dry chemical.
Fire Fighting Procedures:	Cool exposed intact containers with water spray.
Specific Hazards Arising from the Chemical:	High temperatures may cause a polymerizing reaction to occur. Closed containers may rupture or explode during runaway polymerization.
Precautions for Fire Fighters:	Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus in fires involving chemicals.

Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	**HANDS**	**RESPIRATORY**	**THERMAL**
			

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, PPE and Emergency Procedures: Avoid contact with eyes, skin and clothing.
Environmental Precautions: Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.
Methods and Materials for Containment and Clean-up: Exposure to sunlight or artificial light will cause the gel to polymerize into hard plastic. Spread the gel to maximize the surface area. Once the material is hard, pick up and place into a container for disposal.

Recommended Personal Protective Equipment for Containment and Clean-up:

EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

7. HANDLING AND STORAGE

Precautions for Safe Handing: Avoid contact with eyes, skin and clothing. Wash hands thoroughly before eating, drinking, smoking, or using the toilet facilities. Remove contaminated clothing and launder before reuse. Keep out of the reach of children.
Conditions for Safe Storage: Store in a tightly closed container is a cool, well-ventilated location away from incompatible materials. Do not store near high temperatures or ignition sources. Prevent contact with moisture. Refrigeration prolongs shelf life. Store away from food or beverages.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Aliphatic Urethane Methacrylate	United States	Aliphatic Urethane Methacrylate
	Germany	Aliphatic Urethane Methacrylate
	United Kingdom	Aliphatic Urethane Methacrylate
	European Union	Aliphatic Urethane Methacrylate

Amorphous Precipitated Silica	United States	3 mg/m^3 (respirable fraction) TWA , 10 mg/m^3 (inhalable) TWA ACGIH TLV 5 mg/m^3 (respirable fraction) TWA, 15 mg/m^3 (total dust) TWA OSHA PEL
	Germany	4 mg/m3 TWA (inhalable) DFG MAK
	United Kingdom	2.4 mg/m3 TW (respirable), 6 mg/m3 TWA (inhalable) UK OEL
	European Union	None Established

Biological Exposure Limits: None established

Appropriate Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits.

Individual Protection Measures (PPE)

Specific Eye/face Protection: Chemical safety glass or chemical splash goggles.
Specific Skin Protection: Wear rubber gloves to avoid skin contact. Clothing with long sleeves may be needed when working with large quantities. Recommended glove: Rubber Consult glove supplier for thickness and breakthrough times.
Specific Respiratory Protection: None should be needed for normal use. If the product is heated and ventilation is inadequate, wear a NIOSH approved respirator appropriate for the level of exposure. For firefighting, use self-contained breathing apparatus.
Specific Thermal Hazards: None needed.

Recommended Personal Protective Equipment

EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

Environmental Exposure Controls: None required for normal use.

General Hygiene Considerations and Work Practices: Wash thoroughly after handling. Wear impervious clothing as needed to avoid contamination of personal clothing.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Wear appropriate protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, red, blue, or pink, colorless, gels	**Explosive limits:**	LEL: Not applicable UEL: Not applicable
Odor:	Slight ester odor.	**Vapor pressure:**	<1 mmHg
Odor threshold:	Not available	**Vapor density:**	>1
pH:	Not applicable	**Relative density:**	1.2

Melting/freezing point:	<-40°C (<-40°F)	**Solubility:**	Negligible
Initial boiling point and range:	Not available	**Partition coefficient: n-octanol/water:**	Not available
Flash point:	Not flammable	**Auto-ignition temperature:**	Not available
Evaporation rate:	Not available	**Decomposition temperature:**	Not available
Flammability:	Not flammable	**Viscosity:**	90,000 cps @ 40°C (140°F)
Explosive Properties:	Not explosive	**Oxidizing Properties:**	None
% Volatile by Volume:	Negligible		

10. STABILITY AND REACTIVITY

Reactivity:: Non-reactive
Chemical Stability: Stable
Possibility of Hazardous Reactions: Will polymerize in contact with sunlight or artificial light.
Conditions to Avoid: Avoid high temperatures and direct sunlight.
Incompatible materials: Oxidizing agents, reducing agents, free radical imitators, inert gases and oxygen scavengers. Avoid excessive heat, flames, ignition sources and direct sunlight.
Hazardous Decomposition Products: Acrid fumes, carbon and nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: May cause irritation with redness and tearing. Repeated contact may cause moderate irritation.
Skin: May cause irritation with redness and rash. Repeated contact may cause moderate irritation with redness and swelling. May cause allergic skin reaction or sensitization.
Ingestion: None expected under normal conditions of use.
Inhalation: None expected under normal conditions of use.

Chronic Health Effects: Repeated eye contact may cause moderate irritation. Repeated skin contact may cause moderate irritation with redness and swelling. May cause allergic skin reaction or sensitization.

Carcinogenicity: None of the components are listed as carcinogens by OSHA, IARC or NTP, ACGIH or the EU substances directive.

Mutagenicity: No data available. This product is not expected to cause mutagenic activity.

Medical Conditions Aggravated by Exposure: Individuals with chronic skin disorders may be at increased risk from exposure to this material.
Acute Toxicity Data: Aliphatic Urethane Methacrylate: No data available. Amorphous Precipitated Silica: Oral Rat LD50: >10,000 mg/kg, Inhalation Rat LC50: >0.139 mg/l/4 hrs (highest concentration – no deaths), Skin Rabbit LD50: >5,000 mg/kg
Reproductive Toxicity Data: No data available. This product is not expected to cause adverse reproductive effects.
Specific Target Organ Toxicity (STOT): Single Exposure: No data available. Repeated Exposure: No data available.

12. ECOLOGICAL INFORMATION

Toxicity: No toxicity data available. This product is not expected to cause environmental toxicity. .
Persistence and Degradability: No data is currently available.
Bio-accumulative Potential: No data is currently available.
Mobility in Soil: No data is currently available.
Other Adverse Effects: No data is currently available.
Results of PBT/vPvB Assessment: No data is currently available.

13. DISPOSAL CONSIDERATIONS

Regulations: Dispose in accordance with all national and local regulations.
Properties (Physical/Chemical) Affecting Disposal: Exposure to sunlight or artificial light will cause the gel to polymerize into a hard plastic.
Waste Treatment Recommendations: Not applicable

14. TRANSPORT INFORMATION

UN Number:	ADR/RID: None	IMDG: None	IATA: None	DOT: None
UN proper shipping name:	ADR/RID: Not Regulated IMDG: Not Regulated IATA: Not Regulated DOT: Not Regulated			
Transport hazard class(es):	ADR/RID: None	IMDG: None	IATA: None	DOT: None

Packaging group:	ADR/RID: None	IMDG: None	IATA: None	DOT: None
Environmental hazards:	ADR/RID: No	IMDG Marine pollutant: No	IATA: No	DOT: No
Special precautions for user: Not applicable				

15. REGULATORY INFORMATION

U.S. Federal Regulations

US OSHA Hazard Classification: Irritant, Sensitizer.

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): 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.

Toxic Substances Control Act (TSCA): This product is a medical device and not subject to chemical notification requirements.

Clean Water Act (CWA): This material is not regulated under the Clean Water Act

Clean Air Act (CAA): This material is not regulated under the Clean Air Act

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard:	Yes	**Pressure Hazard:**	No
Delayed Hazard:	No	**Reactivity Hazard:**	No
Fire Hazard:	No		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
None		

State Regulations

California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Components	C.A.S. #	WT %
None		

International Regulations

Canadian Workplace Hazardous Materials Information System (WHMIS): Class D 2B (Very toxic material causing other chronic effects)

European Inventory of Existing Chemicals (EINECS): This product is a medical device and not subject to chemical notification requirements.

Australian Inventory of Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Japanese Existing and New Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is a medical device and not subject to chemical notification requirements.

Philippine Inventory of Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

16. OTHER INFORMATION

HMIS Hazard Rating:
Health –2 Flammability – 1 Physical Hazard– 1

Full text of Classification abbreviations used in Section 2 and 3:
Xi Irritant
R36/38 - Irritating to eyes and skin.
R43 – May cause sensitization by skin contact

Supersedes: 11 September 2008

Revision Summary: Change in format. Comprehensive review. Changes to all sections.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
DENTSPLY TRIAD GEL

SYNONYMS
"Part number: 88859, 88860, 88750, 88751, 88762, 90130."

PRODUCT USE
Visible light cure material for the fabrication of orthodontics.

SUPPLIER
Company: DENTSPLY (AUSTRALIA) PTY LTD
Address:
11 - 21 Gilby Road
Mount Waverley
VIC 3149
AUSTRALIA
Telephone: 1300 55 29 29
Emergency Tel: 1300 55 29 29 (Hours of operation: Monday - Friday 9:00 am - 5:00 pm EST; General information only)
Fax: +61 3 9538 8260

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

RISK
■ May produce skin discomfort*.
■ Possible skin sensitiser*.
* (limited evidence).

SAFETY
• Do not breathe dust.
• Avoid contact with skin.
• Wear suitable gloves.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
acrylic resin, non- hazardous		NotSpec

Section 4 - FIRST AID MEASURES

SWALLOWED
• If swallowed do NOT induce vomiting.
• If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
• Observe the patient carefully.
• Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE
■ If this product comes in contact with eyes:
• Wash out immediately with water.
• If irritation continues, seek medical attention.
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
■ If skin contact occurs:
• Immediately remove all contaminated clothing, including footwear.
• Flush skin and hair with running water (and soap if available).
• Seek medical attention in event of irritation.

continued...

INHALED
• If fumes, aerosols or combustion products are inhaled remove from contaminated area.
• Other measures are usually unnecessary.

NOTES TO PHYSICIAN
■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
• Water spray or fog.
• Foam.
• Dry chemical powder.
• BCF (where regulations permit).

FIRE FIGHTING
• Alert Fire Brigade and tell them location and nature of hazard.
• Wear breathing apparatus plus protective gloves in the event of a fire.
• Prevent, by any means available, spillage from entering drains or water courses.
• Use fire fighting procedures suitable for surrounding area.

FIRE/EXPLOSION HAZARD
• Non combustible.
• Not considered a significant fire risk, however containers may burn.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO_2), other pyrolysis products typical of burning organic material.
May emit corrosive fumes.

FIRE INCOMPATIBILITY
• Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM
None

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
• Clean up all spills immediately.
• Avoid contact with skin and eyes.
• Wear impervious gloves and safety goggles.
• Trowel up/scrape up.

MAJOR SPILLS
■ Minor hazard.
• Clear area of personnel.
• Alert Fire Brigade and tell them location and nature of hazard.
• Control personal contact with the substance, by using protective equipment as required.
• Prevent spillage from entering drains or water ways.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
• Avoid all personal contact, including inhalation.
• Wear protective clothing when risk of exposure occurs.
• Use in a well-ventilated area.
• Prevent concentration in hollows and sumps.

SUITABLE CONTAINER
• Polyethylene or polypropylene container.
• Packing as recommended by manufacturer.

continued...

• Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY
• Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS
• Store in original containers.
• Keep containers securely sealed.
• Store in a cool, dry, well-ventilated area.
• Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

MATERIAL DATA
DENTSPLY TRIAD GEL:
Not available

PERSONAL PROTECTION

EYE
• Safety glasses with side shields.
• Chemical goggles.
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET
• Wear chemical protective gloves, eg. PVC.
• Wear safety footwear or safety gumboots, eg. Rubber.
NOTE:
• 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.
• Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

OTHER
■ No special equipment needed when handling small quantities.
OTHERWISE:
• Overalls.
• Barrier cream.
• Eyewash unit.

ENGINEERING CONTROLS
■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Clear viscous gel with a slight ester odour.
Tint added if red, blue or pink.

continued...

PHYSICAL PROPERTIES
Liquid.

State	Gel	Molecular Weight	Not Applicable
Melting Range (℃)	Not Available	Viscosity	Not Available
Boiling Range (℃)	Not Available	Solubility in water (g/L)	N ot Available
Flash Point (℃)	Not Applicable	pH (1% solution)	Not Availab le
Decomposition Temp (℃)	Not Available	pH (as supplied)	Not A vailable
Autoignition Temp (℃)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	1.6<0.13
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.
• Product is considered stable.
• Hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The material has NOT 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 (eg. 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). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

EYE
■ Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN
■ There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.

INHALED
■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS
■ There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

TOXICITY AND IRRITATION
■ Not available. Refer to individual constituents.

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

continued...

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Dentsply Triad Gel	No Data Available	No Data Available		

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:
None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

No data for Dentsply Triad Gel (CW: 4613-03)

Section 16 - 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.

■ 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.

Issue Date: 22-Aug-2012
Print Date: 22-Aug-2012

This is the end of the MSDS.