

TECHNICAL BULLETIN

Made In U.S.A.

Instructions

ATLAS

- **Dual-Cured • Multipurpose • Fluoride-Releasing Resin Cement**
- **Auto-Mix System**

KIT CONTAINS

30 g of adhesive
Accessories & Instructions

Indications for use: final cementation of implant prosthesis, crowns, bridges, in-lays, on-lays, Maryland bridges, veneers, cementation of posts and pins, pit and fissure sealants, periodontal splinting, and cementation of orthodontic bands and appliances.

OUTSTANDING FEATURES OF THE MATERIAL

- Excellent handling characteristics
- Dual-Cured
- Fluoride release
- X-ray opacity
- Low irritation potential
- Negligible solubility
- Low film thickness
- Excellent resistance to oral environment and mechanical strength assure good long-term performance
- Long shelf life

DENT ZAR, INC.

Dent Zar, Inc.
19643 Trull Brook Dr.
Tarzana, CA 91356
U.S.A.
Head Office
800-444-1241
323-465-3621
Fax: 323-465-2994

EC Authorized Representative
Mr. R.J. Macmillan
24-28 St Leonards Road #82
Windsor, Berkshire SL4 3BB
United Kingdom
0-500-892-711, or
0-800-960-750

125 A 1030 Denman St #304
Vancouver B.C. V6G 2M6
Canada
800-444-1241

Suite 260,
453a Mt Eden Road
Mount Eden
Auckland 1024
New Zealand
0-800-55-9635

Suite V15, 9 Crofts Avenue
Hurstville, NSW 2220
Sydney
Australia
1-800-152583

E-mail: dentzar@yahoo.com.

Web Site: www.dentzar.com.

PRODUCT SPECIFICATIONS

Typical Composition	Resin based Bis-GMA, radioopaque glass filler, pyrogenic silica, catalyst, stabilizers, and pigments	
	Total filler content (by weight)	61 %
	Total filler content (by volume)	41 %
	Specific gravity	1.72 g/cm ³
Working properties	Mixing time	Auto-Mix System
	Working time (incl. mixing time; 23 °C; 74 °F)	> 90 sec
	Depth of light cure	> 1,75 mm*
	Self-cured mode (37 °C; 99 °F);	3:00 min
Physical properties	Flexural (transverse) strength	130 MPa
	Flexural modulus	5000 MPa
	Compressive strength	320 MPa
	Diametral tensile strength	52 MPa
	Water sorption	< 20 µg/mm ³
	Water solubility	< 5 µg/mm ³
	Color stability	very good
	Barcol hardness	70
	Radioopacity	ca. 250% Al
Storage		< 20 °C (68 °F) Store unopened material in the refrigerator!
Shelf life		2 years

* the measured value (height of the cylinder of cured material) divided by two, according to ISO 4049

DIRECTIONS FOR USE

TOOTH PREPARATION

Remove temporary, clean preparation and try in restoration.

ACID ETCH TECHNIQUE

Apply etching agent with a dabbing motion to the prepared tooth surface. Rinse and dry thoroughly with oil-free air. Do not use alcohol or other drying agents to dry the tooth. Resulting residue, or loss of surface energy, will decrease bond strength.

RESTORATION PREPARATION

Metal to Enamel/Dentin (Metal restorations to tooth structure: crowns, inlays, bridges and posts, including Maryland bridges)

After try-in, sandblast the internal aspect of the restoration for 3-4 seconds. Rinse and dry. Clean the tooth with non-fluoridated prophylaxis paste or pumice. Apply enamel and dentin bonding system of your choice to the tooth. Dent Zar's Z Bond-dentin/enamel bonding agent may be applied.

Metal to Metal (Implant prosthesis or crown on post)

Sandblast all external metal surfaces that are exposed to the paste. Rough intra-oral metal with a micro-etcher or bur. Rinse and dry. Using a metal primer of your choice, treat the metal exposed to the paste. Clean posts or abutments with non-fluoridated paste or pumice.

Ceramic Restorations (Porcelain veneers, in-lays, on-lays)

Sandblast the internal aspect of the restoration for 1-2 seconds. Rinse and dry. Apply any concentration of phosphoric acid to acidify sandblasted surface. Rinse and dry. Apply 1 to 2 coats of Saline Primer to porcelain restoration (Saline Primer may be ordered from Dent Zar.) Allow to air dry for 30 seconds. Clean the tooth with non-fluoridated prophylaxis paste or pumice. Apply a bonding agent of your choice to the tooth. Dent Zar's Z Bond dentin/enamel bonding agent may be applied and can be ordered from Dent Zar.

CEMENTATION

Remove the closure cap from the cartridge (***Do not re-use the cap!***), install the mixing tip onto the cartridge and extract the needed amount of the material. After each use ***leave the used mixing tip in place to seal the cartridge.*** The initial extraction from the mixing tip (about the size of a pea) should be discarded. The following mix will be perfect. This must be done for each new mix. A thin film of Atlas cement should be applied to the etched surfaces of the prosthesis, and then the prosthesis should be quickly inserted into place. Seat the prosthesis with gentle and passive pressure. Jiggling or movement of any kind after seating may decrease the bond strength. Hold it in place until paste reaches initial set (about 2 minutes). Use a scaler, or explorer to remove excess cement immediately upon initial set. It is important not to wait until final set to remove excess cement.

In the case of a porcelain or composite prosthesis where light curing can penetrate the surface, light cure each surface. Check and adjust occlusion. However, minimize any kind of grinding that may elicit heat on metal, porcelain or cement. Use cold water while polishing.

NOTES AND GUIDELINES

- **CAUTION:** May cause skin irritation. Avoid contact with eyes, skin, and clothing. The unpolymerized resin may cause skin sensitization (dermatitis) in susceptible persons. Wash thoroughly with soap and water after contact. If skin sensitization occurs, or if known allergy to methacrylate exists, discontinue use.
- In the case of caries and small old amalgams that are removed prior to cementation, dentin should be protected by lining of calcium hydroxide or polycarboxylate cement.

STORAGE

To enhance shelf life, Atlas should be stored in a refrigerator. Allow materials to return to room temperature before using. Do not expose material to intense light. Do not store near eugenol-based materials.

Material Safety Data Sheet

1. Product identification/preparation/company undertaking

Atlas—A Dual-Cured, Fluoride Releasing, Filled Composite, Multipurpose Cement
 Dent Zar, Inc
 19643 Trull Brook Drive
 Tarzana, CA 91356 Phone: (800) 444-1241, Outside U.S.-323-465-3621, Fax: (323) 465-2994

2. Composition/information of ingredients

Chemical characterization: mixture of resin based on Bis-GMA, catalysts, stabilizer, pigments

Description:

Hazardous components: none

3. Hazards identification

Risk identification:

Special risks for human beings and environment:

Classification: classification corresponds to actual EEC guidelines

4. First-aid measures

General information:

skin contact: wash with plenty of water and soap

eye contact: rinse with plenty of water and consult a physician

swallowing: seek medical advice immediately

5. Fire fighting measures

Extinguishing media: CO₂ water

Protective equipment:

6. Accidental release measures

Personal precautions:

Environmental precautions:

Methods for cleaning up: wipe out with absorbent material

Additional information:

7. Handling and storage

Handling:

Handling procedures:

Recommendation for fire and explosion protection:

storage: store at dry place (< 20°C), store away from food

Requirements at storerooms and containers:

Requirements for storage with other products:

Additional storage conditions:

Storage classification:

VBF-classification:

8. Exposure controls/personal protection

Additional information for technical plants:

Components with limits of values to be supervised at the workplace: the product contains no relevant quantities of components with limits of values to be supervised at the workplace.

additional information:

Personal protective equipment: not necessary

General measures of protection and hygiene: normal hygienic measures

respiration:

hands:

eyes:

9. Physical and chemical properties

Appearance

Form: paste, white yellowish

Color: tooth colored

Odor: odorless

Information on change in the physical state

Melting point/melting range: N/A

Boiling point/boiling range: N/A

Flash point: N/A

Auto ignition temperature: N/A

Danger of explosion: None

Density:

Vapor pressure: 1.72 g/cm³

Viscosity: Paste

pH: neutral

Solubility in/miscibility with: slightly in toluene

Water: insoluble

Content of solvents: none

Organic solvents: -

Water: N/A

Content of solids

10. Stability and reactivity

Incompatibility with other substances: unstable, avoid heat, direct sunlight peroxides, metal powders, strong oxidizers, free radical initiators.

Hazardous decomposition products: not known

11. Toxicological information

Acute toxicity: allergic reaction to methacrylate by chronic exposure to product is possible.

Primary irritation:

skin:

eye: contact: X; skin absorption: n.d.

inhalation: irritating

ingestion: non volatile

Sensitization of product: possible toxic when swallowed

additional toxicological information: not observed

During the long period of use for dental purposes, no health problems were reported.

12. Ecological information

General information:

Classification of water endangerment: no data known

13. Disposal consideration

Product:

Recommendation: use proper landfill disposal or incineration in accordance with local, state and federal regulations.

Disposal key number:

Uncleaned packaging:

Recommendation:

14. Transport information

RID/ADR:

15. Regulatory information

Classification according to EEC-guidelines: no classification necessary to actual EEC guidelines

National Prescriptions:

Classification according to VbF: N/A

16. Other information: the above information is based on our present day knowledge and relates solely to the safety requirements of the product. The data do not signify any warranty concerning products properties. However, users of the product should satisfy themselves that the information given is sufficient and correct for their specific circumstances of use.