

ChemFil® Superior

Fast Setting Glass-Ionomer Restorative Material

ChemFil® Superior is a fast-setting glass-ionomer restorative material consisting of a blend of aluminosilicate glass and polyacrylic acid. The powder is mixed with distilled water to produce a filling material which adheres to dentine and enamel producing tightly sealed, strong and aesthetic restorations.

ChemFil Superior is available in 7 shades: L, LY, LYG, LG, DG, DY, GB.

ChemFil Superior complies with the requirements of ISO 9917-1:2003 for glass-ionomer restorative materials.

COMPOSITION

1 g powder contains:

- | | |
|---|--------|
| - Aluminium-sodium-calcium-fluoro-phosphoro-silicate (18:9:8:16:3:46) | 0.84 g |
| - Polyacrylic acid (MW 30000-45000) | 0.15 g |

INDICATIONS

This material is suitable for use in:

1. Class V lesions and cavities
2. Class I and II cavities of deciduous teeth
3. Class III cavities
4. Temporary and semi-permanent restorations
5. Fissure fillings (minimal Class I cavities)

CONTRAINDICATIONS

- Direct or indirect pulp-capping.
- Permanent restoration of occlusal stress-bearing areas.

PRECAUTIONS

The desiccant crystals integrated in the cap and/or drying capsule protect the powder from absorbing moisture. The colour of the desiccant crystals should be orange. Do not use the powder when the desiccant crystals have turned colourless as humidity may have adversely affected the powder.

STEP-BY-STEP INSTRUCTIONS

Cavity Preparation

In all classes of cavity this may be kept to the minimum required for caries removal. Preparation of mechanical retention is not needed except when restoration is liable to be subjected to high displacement forces.

Cleaning

Surface cleanliness is paramount for the development of adhesion. Clean freshly cut enamel and dentine with water spray and air-dry. Where no cavity preparation is necessary, clean the tooth surface with rubber cup and pumice or a prophylactic paste (Zircate® or Nupro®). Wash thoroughly with water spray and air-dry.

Pulp Protection

In deep cavities cover the dentine closest to the pulp with a calcium hydroxide liner (Dycal®) leaving the rest of the cavity floor and walls free for chemical bonding with ChemFil Superior.

Surface Conditioning

For surface conditioning, ChemFil Tooth Cleanser or ChemFlex™ Liquid may be used. Apply ChemFil Tooth Cleanser or ChemFlex Liquid to the cavity surface and allow it to remain for 15 seconds. Wash off and remove rinsing water, **leaving a moist surface.**

Shade Selection

ChemFil Superior is available in 7 shades. Shade selection is made with the shade guide supplied. As the translucency and colour of glass-ionomer cements change during the first hours after placement, the shade guide represents the final shade of the restoration.

DOSAGE AND MIXING

Mix ratio:

2 scoops powder : 2 drops liquid¹

Fill the water dispenser with distilled or deionized water and place the plastic insert into the neck. To dispense water, hold the bottle vertically above pad and squeeze gently. Always invert powder bottle before use to fluff the powder. Overfill the powder scoop and strike off the excess with the bottle insert leaving a flat surface level with the edge of the scoop. Take care not to press the powder into scoop, as this can give too thick a mixture.

Mixing

Mix the product using a stainless steel or agate spatula on the mixing pad provided or a glass slab².

Divide the powder into two equal parts. Mix the first part with the water in five seconds or less, then add the second part and mix for about ten seconds – **maximum mixing time 20 seconds.**

The consistency of the mixed material should resemble that of a composite resin.

Working Time²

The working time from start of mix is approximately 2 minutes.

Setting Time³

The setting time from end of mix is 2 to 3 minutes.

¹ The same powder:liquid ratio (7.4 g : 1 g) is proposed for testing purposes according to ISO 9917-1:2003.

² Mixing and application of the material should be done at normal room temperature. Higher temperatures accelerate the setting time of the cement. Under warm conditions or if a long working time is required, it is therefore recommended that the glass slab be cooled. For testing purposes according to ISO 9917-1:2003 the material is tested at 23 °C ± 1 °C and with a relative humidity of 50 ± 10%.

³ Net setting time determined according to ISO 9917-1:2003.

Placement

Contamination of the filling with saliva or water must be avoided during insertion. Pack the mixed cement firmly into place and contour with a suitable matrix. If a stainless steel matrix is used (Class II restoration), coat the contact surface with Vaseline.

For Class V cavities cervical matrix bands may be used:

- Choose a foil slightly larger than the anticipated cavity. Adapt the matrix to the anatomical shape of the tooth with a composite instrument. Remove and keep ready for use.
- After preparation, fill the cavity to a slight excess.
- Cover the filling with the preformed matrix, and carefully press the margins of the matrix to the tooth with a composite instrument.
- Keep the matrix in place for at least 4 minutes.

As glass-ionomer cements are susceptible to moisture contamination or dehydration during and immediately after setting, coat the restoration with ChemVarnish™ immediately upon removal of the matrix. Dry varnish layer using the air syringe. To ensure a continuous film apply a second layer of varnish and dry again.

Finishing

Finishing and polishing is best carried out at the next appointment. However, the restoration is sufficiently hard for water-free finishing approximately 7 minutes after placement. If performed at this time or within 24 hours, finishing and polishing instruments should be lubricated with Vaseline and water spray should not be used. Before dismissing the patient the restoration should be protected from dehydration and moisture by painting the surface with ChemVarnish.

If finished after 24 hours water spray may be used and the restoration need not be protected with ChemVarnish.

Remove any large excess of material with finishing burs and complete finishing with finishing discs or strips. Finally buff the restoration to a high lustre with polishing cups and paste. The Enhance™ Finishing and Polishing System is recommended.

CLEANING OF INSTRUMENTS

Glass-ionomers adhere to instruments and glass slabs.

Immediately after use, either clean instruments with water or drop in disinfectant or water to facilitate subsequent cleaning.

SPECIAL NOTES

For dental use only.

Keep away from children.

Avoid contact with the eyes. In case of contact, immediately rinse eyes with plenty of water and seek medical attention.

STORAGE AND SHELF-LIFE

To be stored at temperatures between 10 and 24 °C.

Replace cap tightly after use. Humidity can adversely affect the properties of glass-ionomer cements.

Under these conditions, ChemFil Superior has a minimum shelf life of three years.

Inadequate storage conditions will shorten the shelf life and may lead to a malfunction of the product.

BATCH NUMBER  AND EXPIRY DATE 

The batch number should be quoted in all correspondence which requires identification of the product.

Do not use after expiry date.

If you have any questions, please contact:



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