

GC Fuji Lining LC Paste Pak (GC America) (Project 06-022) (8/07)

GC Fuji Lining LC Paste Pak is a glass-ionomer liner/base material that is available in a paste/paste delivery system, as compared to the previous Fuji Lining LC powder/liquid system. The paste materials are contained in the GC America's Paste Pak Dispensing System, which is said to provide an accurate mixing ratio with no waste. GC Fuji Lining LC Paste Pak provides radiopacity similar to dentin, good physical properties, and long-term fluoride release. The manufacturer states that GC Fuji Lining LC Paste Pak provides approximately 120 average applications.

Manufacturer:

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Suggested Retail Price:

- \$172.00 GC Fuji Lining LC Paste Pak Starter Package (Item #432571) contains:
1 Fuji Lining Paste Pak Cartridge (7.0 grams=4.7 mL paste)
1 Mixing Pad
1 Paste Pak Dispenser
1 Mixing Spatula
Instructions
- \$130.50 GC Fuji Lining LC Refill Package (Item#001887) contains:
1 Fuji Lining Paste Pak Cartridge
1 Mixing Pad
Instructions

Government Price:

- \$71.55 GC Fuji Lining LC Paste Pak Starter Package (item number and contents as listed above)
- \$35.55 Fuji GC Fuji Lining LC Refill Package (item number and contents as listed above)

ADVANTAGES:

- + Consistent and dependable delivery of material components
- + Easier to prepare than traditional Fuji Lining LC powder/liquid delivery system
- + Material viscosity reported to be satisfactory
- + Flexure strength and modulus comparable to Fuji Lining LC powder/liquid delivery system
- + Compressive strength comparable to Fuji Lining LC powder/liquid delivery system
- + One-week compressive strength similar to Vitrebond Plus
- + One-month flexural strength greater than Vitrebond Plus
- + Simulated environmental storage conditions generally do not impair physical properties
- + Less expensive than Vitrebond Plus

DISADVANTAGES:

- Preparation requires the Paste Pak dispenser
- May be difficult to distinguish from dentin radiographically
- Clinicians accustomed to powder/liquid formulations may find prepared material less viscous

SUMMARY AND CONCLUSIONS:

Fuji Lining LC Paste Pak Light Cure Glass Ionomer Liner Base is a resin-modified glass-ionomer liner/base material that offers a simplified paste/paste delivery system using the metal Paste Pak dispensing device. Infrared spectroscopy revealed that Fuji Lining LC Paste Pak contained both a visible light activated curing mechanism as well as a slower, but continuous polyalkenoate acid-base reaction. During this evaluation the physical properties of Fuji Lining LC Paste Pak were similar to the traditional powder/liquid Fuji Lining LC formulation. Furthermore, simulated environmental storage conditions generally did not have any negative effects on the physical properties of Fuji Lining LC Paste Pak. Clinical users were very enthusiastic about the simplified delivery system compared to a powder/liquid formulation, noting an easier and more consistent material preparation. The evaluators who were familiar with Vitrebond Plus reported that the perceived material viscosity was satisfactory. However, a few evaluators familiar only with a powder/liquid liner/base system thought that Fuji Lining LC Paste Pak should be more viscous. During laboratory testing, Fuji Lining LC Paste Pak was found to have slightly less radiopacity than the Fuji Lining LC powder/liquid product. The Paste Pak product displayed the same radiopacity as dentin. This may make distinguishing between Fuji Lining LC Paste Pak and dentin more difficult radiographically. Fuji Lining LC Paste Pak has outstanding potential over powder/liquid base/liner systems to meet the unique needs of the dental expeditionary mission. While more expensive than the Fuji Lining LC powder/liquid delivery system, Fuji Lining LC Paste Pak represents a cost savings compared to other new liner/base systems (e.g., Vitrebond Plus is approximately 2.5 times more expensive). **GC Fuji Liner LC Paste Pak Lining Base Material** is rated **Outstanding** for use in US Air Force dental facilities.