

## 59-12 GC Fuji Ortho and GC Fuji Ortho LC Orthodontic Cements (Project 97-31) (8/99)

GC America markets GC Fuji Ortho and GC Fuji Ortho LC orthodontic cements for the luting of orthodontic brackets and bands. GC Fuji Ortho is a auto-cure resin-modified glass-ionomer cement while GC Fuji Ortho LC is a resin-modified glass-ionomer cement that is cured by visible light activation. The manufacturer claims these products bond chemically to tooth structure and release fluoride. Both products are advertised as bonding to porcelain and metal. The cements' fluoride release is purported to prevent caries formation and protect against "white spot" decalcification marks. Also, both products are said to exhibit low sensitivity to moisture contamination; in fact, GC America claims that the bond to tooth structure improves with moisture. Furthermore, these products are said to be able to bond orthodontic brackets with a non-etch technique. However, both products are purportedly compatible with polyacrylic acid conditioning or with phosphoric acid etching of enamel, if the clinician wishes to use them. Both cements are in powder/liquid form. Fuji Ortho LC is available in bulk form (ie, bottle of powder and bottle of liquid) and in capsules. Fuji Ortho is only sold in bulk form. GC America claims that, after completion of treatment, it is easier to debond orthodontic appliances that have been luted with either of the two cements than it is to debond them if they had been luted with a resin cement. As a result, there is said to be less potential for damaging the enamel during debonding.



### Manufacturer:

GC America Inc  
3737 West 127th Street  
Alsip, IL 60803  
(800) 323-3386  
(708) 597-0900  
(708) 371-5148 FAX  
[www.gcamerica.com](http://www.gcamerica.com)

### Suggested Retail Price:

- \$99.95 Fuji Ortho LC Starter Kit (Item #439411)
  - 15 g of powder
  - 8 g (6.8 mL) of liquid
  - 25 g of GC Ortho Conditioner
  - mixing pad and scoop
  - training video and education packet
- \$195.00 Fuji Ortho LC Standard Package (Item #439403)
  - 40 g of powder
  - two 8-g bottles (6.8 mL) of liquid
  - mixing pad and scoop
- \$160.00 Fuji Ortho LC Capsule Package (Item #439450)
  - 50 capsules
  - application gun
- \$178.50 Fuji Ortho Introductory Kit (Item #439501)
  - 40 g of powder
  - two 8-g bottles (6.8 mL) of liquid
  - mixing pad and scoop
  - training video and education packet
- \$178.50 Fuji Ortho Standard Package (Item #439503)
  - 40 g of powder
  - two 8-g (6.8 mL) bottles of liquid
  - mixing pad and scoop

**Government Price: (Product contents as listed above)**

\$65.00 Fuji Ortho LC Starter Kit (Item #439411)

\$87.75 Fuji Ortho LC Standard Package (Item #439403)

\$57.60 Fuji Ortho LC Capsule Package (Item #439450)

\$76.50 Fuji Ortho Introductory Kit (Item # 439501)

\$76.50 Fuji Ortho Standard Package (Item #439503)

**ADVANTAGES:**

- + Provides adequate bond strength for typical orthodontic use.
- + No enamel etching required before bonding.
- + Provides adequate bonding of orthodontic appliances in situations where moisture cannot be adequately controlled.
- + Releases fluoride.
- + No caries or decalcification "white spot" formation noted during this evaluation.
- + Easy to remove appliances and clean up residual cement.
- + Easy to integrate with existing orthodontic resin composite bonding technique.
- + Written instructions are readable with adequate amount of detail and technique description.
- + Educational video in Introductory Kit; easy to understand with excellent technique description.
- + Excellent packaging configuration.
- + Metal application gun makes it easier to place precapsulated cement material.

**DISADVANTAGES:**

- Initial viscosity may allow some bracket "creep."
- Greater incidence of bracket debonding when used with a no-etch, no-conditioning technique.

**SUMMARY AND CONCLUSIONS:**

GC Fuji Ortho and GC Fuji Ortho LC are resin-modified glass-ionomer orthodontic luting cements that offer conventional auto-cure and visible light-cure capabilities as well as the flexibility of hand-mixed and precapsulated delivery systems. Clinical evaluators found these materials to be simple to use and easy to integrate into their existing clinical technique. The products appeared to provide acceptable clinical bond strength. Users found that the GC Fuji Ortho cements bonded to tooth structure without acid etching or conditioning, but a debonding rate of three percent was reported during this evaluation when no etching or conditioning was done. The cements provided good bonding in moist environments, were easy to clean up, and did not facilitate the development of any caries or "white-spot" decalcification lesions. Clinical users found the initial viscosity allowed some initial "bracket creep." The **GC Fuji Ortho Cements** are rated **Acceptable** for use by the federal dental services.