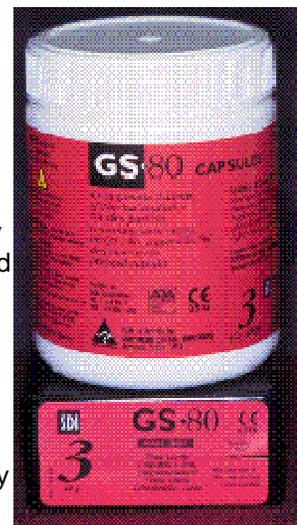


56-08 GS 80 Amalgam (Project 98-09) (12/98)

GS 80 is manufactured by Southern Dental Industries (SDI) as a high-copper, non-gamma 2, admixed amalgam alloy. The alloy composition is 40.0 percent silver, 31.3 percent tin, and 28.7 percent copper. GS 80 requires 47.9 percent mercury for optimum amalgamation. SDI claims that GS 80 possesses excellent marginal sealing capability due to its approximately two micron per centimeter 24-hour dimensional expansion upon setting. SDI purports this produces zero postoperative sensitivity. The formulation of GS 80 is said to provide high initial and final compressive strengths to give protection from early fracture. The product's 60-minute compressive and tensile strength are reported by SDI to be higher than those of Dispersalloy (Dentsply/Cauk). Physical properties of GS 80 are reported to include a 60-minute compressive strength of 225 MPa (38,000 psi) which is stronger than the value Dentsply reports for Dispersalloy (152 MPa). Also, SDI reports GS 80's 60-minute diametral tensile strength to be 22 MPa (4000 psi) as compared to Dispersalloy's 18 MPa.

SDI offers GS 80 in three different delivery designs: alloy powder-mercury, alloy tablet-mercury, and standard pre-dosed capsules. Capsules are available in one-, two-, three-, and five-spill sizes. All GS 80 capsules are hand activated, not requiring a separate activation device. GS 80 is available in fast set (nine minutes), regular set (ten minutes), and slow set (14 minutes).



Manufacturer:

Southern Dental Industries, Inc.
246 First Street, Suite 204
San Francisco, CA 94105
(800) 228-5166
(415) 975-8060
(415) 975-8065 FAX

Suggested Retail Price:

(3-spill)
\$53.50 50-capsule pack
\$481.55 500-capsule bulk

Government Price:

(3-spill)
\$27.29 50-capsule pack
\$245.68 500-capsule bulk

ADVANTAGES:

- + Favorable physical properties as compared to other available dispersed phase alloys.
- + Condensation properties comparable to other dispersed phase alloys.
- + Easy to use with existing clinical techniques.
- + Straightforward and efficient packaging design.
- + Instructions are legible and complete.
- + Capsules are easy to activate and open.
- + Published sources report three-year clinical performance comparable to other alloys.
- + No reports of post-operative sensitivity in this evaluation.
- + Available in three setting times (fast, regular, and slow set).
- + Available in four spill sizes (1, 2, 3, and 5).
- + Introductory packs available which provide a mixture of all spill sizes.

- + 50-capsule packages are less expensive than other alloys.
- + 500-capsule bulk package price is comparable to other alloys.

DISADVANTAGES:

- No trituration setting times available for Pro-Mix amalgamator.
- Capsules difficult place in VariMix III amalgamator.
- Some users may find this amalgam to be grainy.

SUMMARY AND CONCLUSIONS:

GS 80 is a dispersed phase amalgam alloy marketed by Southern Dental Industries that has been recently introduced in the United States. Clinical users in this evaluation appreciated GS 80's clinical handling features and reported that the capsules were easy to activate and open. The alloy demonstrated resistance to condensation that enabled users to establish contours and interproximal contacts that were comparable to those of other dispersed phase alloys. The amalgam also demonstrated good carving characteristics. GS 80 demonstrated microleakage comparable to other alloys. This product has been evaluated clinically by outside researchers and shown to be comparable to alloys of similar type. GS 80 is available in three setting times and four spill sizes. Eighty-three percent of the evaluators rated GS 80 as above average and recommended it for general use in their clinics. **GS 80** is rated **Acceptable** for use by the federal dental services.