

56-07 Lojic+ Amalgam (Project 98-03) (11/98)

Lojic+ is manufactured by Southern Dental Industries (SDI) and is a high-copper, platinum-modified, non-gamma 2, single-composition spherical alloy. The alloy composition is 60.1 percent silver, 28.05 percent tin, 11.8 percent copper, and 0.05 percent platinum. SDI claims the platinum addition increases Lojic+'s tensile and compressive strength by five percent. Lojic+ requires 42.2 percent mercury for optimum amalgamation. Lojic+ is said to possess positive condensation characteristics for establishing interproximal contacts. Increased resistance to condensation is reported to be related to both rough surface texture of the spherical particles as well as a wide range of spherical particle size (2 to 56 µm). SDI offers Lojic+ with different delivery designs. It is available in alloy powder-mercury, alloy tablet-mercury, standard pre-dosed capsules, and a unique direct placement capsule delivery system. The direct placement amalgam capsule is an innovative design that allows the direct injection of amalgam into the preparation, thereby eliminating amalgam carrier use. This system, according to SDI, features both a substantial reduction in procedure time and reduced mercury vapor exposure during amalgam placement. SDI states that the direct placement capsules can be used with most amalgamators, although the triturator forks must be changed with a kit that SDI will provide. Standard capsules are available in one-, two-, three-, and five-spill sizes while the direct placement capsules are available in one-, two-, and three-spill. All Lojic+ capsule designs are hand activated and they do not require a separate activation device.



Lojic+ is available in various setting times. Standard capsules are available in fast set (seven minutes), regular set (nine minutes), and slow set (ten minutes). According to SDI, Lojic+ fast set is equivalent to Tytin's setting time. The direct placement amalgam capsules are only available in fast set (seven 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 Cost:

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

Government Cost:

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

ADVANTAGES:

- + Favorable physical properties as compared to other available spherical alloys.
- + Straightforward and efficient packaging design.
- + Instructions are legible and complete.
- + Easy to use with existing clinical techniques.
- + Excellent condensation properties.
- + Easier to establish proximal contacts than with other single-composition spherical alloys.

- + Capsules are easy to activate and open.
- + Published sources report favorable microleakage compared to other spherical alloys.
- + 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 37 percent less expensive than Tytin.
- + 500-capsule bulk packages are less expensive than Tytin.

DISADVANTAGES:

- No trituration setting times available for Pro-Mix amalgamator.
- Published sources report Lojic+ may tarnish slightly more than other amalgam alloys.

SUMMARY AND CONCLUSIONS:

Lojic+ is a platinum-modified, single-composition spherical alloy marketed by Southern Dental Industries that has been recently introduced in the United States. Clinical users in this evaluation overwhelmingly appreciated Lojic+'s clinical handling features. Evaluators reported that the capsules were easy to activate and open. The alloy demonstrated a dispersed-phase type of resistance to condensation that allowed establishment of contours and interproximal contacts. The amalgam also demonstrated good carving characteristics. Lojic+ has been shown to have statistically less microleakage than Tytin by outside researchers, however DIS found no significant difference between the two brands. The amalgam has been evaluated clinically by outside researchers and shown to be comparable to other alloys. Lojic+ is available in three setting times and four spill sizes. All ten evaluators rated Lojic+ as above average and nine of ten recommended it for general use in their clinics. **Lojic+** is less expensive than Tytin. Lojic+ is rated **Acceptable** for use by the federal dental services. Lojic+ is recommended for clinicians who desire a spherical amalgam alloy with clinical handling characteristics of a dispersed phase amalgam.