

63-13 Original D Amalgam (Project 01-19) (07/01)



Original D is a high-copper, admixed alloy containing spherical silver-copper eutectic particles dispersed within silver-tin lathe cut particles. Compositionally, Original D consists of silver (69.5%), tin (17.5%), copper (12.0%), and zinc (1.0%). Its mercury to alloy ratio is 50%. Because of its silver-copper eutectic particles, gamma two is eliminated from the alloy. The product was first evaluated by DIS in 1991 (Project 91-18) and received an "Acceptable" rating. Although its composition has not been changed since that time, Original D's manufacturer, the Wykle Company, reports that its capsule design has been improved. Specifically, the mercury is no longer delivered to the alloy powder using a pillow pack. Instead, the self-activating, recloseable capsule uses an innovative, two-piece, plastic pestle that has a collapsing compartment that delivers the mercury during trituration. Wykle claims that this has reduced the incidence of incomplete and poor mixing. Original D is available in 100- and 500-capsule lots in 1-, 2-, and 3-spill sizes. Three setting times are also available: Regular (5 minutes), Fast (4 minutes), and X-tra Fast (3 minutes). Only the Fast-Set and Regular-Set versions were evaluated by DIS.

Manufacturer:

Wykle Research, Inc.
 2222 Hot Springs Road
 Carson City, NV 89706
 (800) 859-6641
 (775) 887-7500
 (775) 882-7952 FAX
wykledirect.netfirms.com/nav.html

Suggested Retail Prices:

Description	Item No.	National Stock Number (NSN)	Price
1 Spill, Regular Set, 100 capsules	61150-03	-----	\$71.00
2 Spill, Regular Set, 100 capsules	61250-03	-----	\$88.00
2 Spill, Fast Set, 100 capsules	61240-03	-----	\$88.00
1 Spill, Regular Set, 500 capsules	61152-03	6520-01-341-8729	\$305.00
2 Spill, Regular Set, 500 capsules	61252-03	6520-01-341-8728	\$332.00
2 Spill, Fast Set, 500 capsules	61242-03	6520-01-341-8730	\$332.00

Government Prices: Same as retail

ADVANTAGES:

- + Based on testing by a university laboratory, dimensional change, strength, and creep values all met specification requirements.
- + Capsules are self-activating.
- + Features an innovative mercury delivery system.
- + Is available in three spill sizes and three setting times.

- + Instructions are clear and concise.
- + Provided with Material Safety Data Sheet (MSDS).

DISADVANTAGES:

- Setting times and frequencies are not provided in instructions for some popular triturators.
- Users reported having to make trial mixes to determine proper triturator settings.
- Four of the seven evaluators reported an unusually large number of capsules with unmixed amalgam after trituration.
- Reported by users to require more force to condense than Dispersalloy and to be more difficult to carve.
- Some users may find the capsules difficult to open.

SUMMARY AND CONCLUSIONS:

Clinical evaluators were somewhat mixed in their opinions of Original D. Some users found the product's handling characteristics to be in keeping with other admixed alloys they had used. Others, however, reported problems including the need for initial trial mixes to determine the exact triturator settings to use with the amalgam. Even after determining the appropriate settings for their triturators, users experienced a number of nonhomogeneous mixes. The latter may have been due to mixing the material at a suboptimal frequency. It is important to mix Original D at the recommended, relatively-high frequency to ensure proper trituration. Laboratory data provided by an outside laboratory indicates that Original D's strength, creep value, and degree of dimensional change are well within the requirements of the applicable standard. Generally, Original D is more expensive than the admixed alloy Dispersalloy, however there are some spill-size/capsule-quantity combinations that are cheaper. A majority of the evaluators, however, felt that Original D required more force to condense and was more difficult to carve than Dispersalloy. DIS expects that users' satisfaction with Original D will depend on their familiarity with their current admixed alloy and the degree to which they are satisfied with it. Five of the seven evaluators awarded Original D an overall rating of only "Average" or "Fair." Most said they would not replace their clinic's current admixed amalgam with the product. **Original D** is rated **Acceptable** for use by the federal dental services.