50-37 Whip Mix Power Cast Investment (Project 96-02S) (11/96)

Power Cast is a carbon-free, fine-grain, phosphate-bonded investment for casting noble-metal and base-metal alloys. It is formulated for use with a rapid burnout technique, and can be used with either a metal ring or ringless.

Manufacturer/Source:
Whip Mix Corporation
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P.O. Box 17183
Louisville, KY 40217-0183
(800) 626-5651
(502) 637-1451
(502) 634-4512 FAX

Suggested Retail Price:

Price	Catalog Number	Quantity
$117.00	32824	150 X 60-g pouches, two liters Power Plus liquid
$117.00	32832	100 X 90-g pouches, two liters Power Plus liquid
$117.00	32840	50 X 180-g pouches, two liters Power Plus liquid
$ 29.50	32808	25 X 60-g pouches, 340mL Power Plus liquid
$ 38.20	32816	25 X 90-g pouches, 340mL Power Plus liquid
$ 72.85	32794	1 X 20-lb can, two liters Power Plus liquid

Government Price:

Price	Catalog Number	Quantity
$ 96.10	32824	150 X 60-g pouches, two liters Power Plus liquid
$ 96.10	32832	100 X 90-g pouches, two liters Power Plus liquid
$ 96.10	32840	50 X 180-g pouches, two liters Power Plus liquid
$ 26.60	32808	25 X 60-g pouches, 340mL Power Plus liquid
$ 32.90	32816	25 X 90-g pouches, 340mL Power Plus liquid
$ 61.90	32794	1 X 20-lb can, two liters Power Plus liquid

ADVANTAGES:
+ Requires only 85 minutes elapsed time from the investment of the pattern to the casting using the rapid burnout technique with a metal ring.
+ Evaluators felt that castings made with the rapid burnout technique were comparable in quality to castings made with their standard investment technique.

DISADVANTAGES:
- Under certain conditions, Power Cast requires more time to go from pattern investment to casting than a competitor's currently-available rapid burnout technique.
- Unable to use the rapid burnout technique if using solid plastic sprues or patterns; this eliminates the benefit of this high speed investment. (Hollow plastic sprue allows the use of the rapid burnout technique.)

SUMMARY AND CONCLUSIONS:
There are three burnout techniques available using Power Cast investment. The two-stage technique for wax sprues and patterns takes approximately two hours. The two-stage technique for plastic and plastic/wax sprues and patterns requires approximately three hours. The third technique is the rapid burnout technique. This is a time-saving technique compared to using standard phosphate investments with a metal ring mold. The speed with which it can be accomplished using Power Cast depends on whether a ring mold or a ringless mold is used. Using a ring mold, the technique requires only 85 minutes to go from investment of the pattern to the casting. With a single ringless mold, however, it can take as long as 1 hour, 39 minutes. This is longer than at least one other rapid burnout investment on the market. The additional time required with a ringless mold is needed to prevent cracking of the investment. It should be noted that the time can be reduced by burning out two or more ringless molds simultaneously. The other mold(s) help raise humidity in the oven and reduce the potential for cracking. A number of crowns and fixed partial dentures were cast using the three burnout techniques with both Olympia® and various base-metal alloys. Evaluators reported that the quality of castings produced using the three burnout techniques was comparable to the quality of castings made with their standard investment. Evaluators preferred the rapid burnout procedure due to its speed and favorable results. Type III gold castings were slightly rougher but were acceptable. **Whip Mix Power Cast Investment** is rated **Acceptable** for use by the federal dental services.