

Powder Power

Tips for Choosing Casting Investment

From the creation of a master model to breakout and final finish, the casting process comprises a series of integral steps, each of which contribute to the final casting's quality. This Tech Sheet explores one of those steps—the investment process—and offers tips for selecting suitable powder.

Casters must continually evaluate whether the investment they're using continues to best meet their needs. Is their current powder suitable for the various alternative metals that have become more popular over the past few years? And what of the newer investments being introduced to the industry—is there a better alternative? (In the past few years, two new investments—Noble for platinum/palladium and Ultra-Vest MAXX for palladium white gold, both manufactured by Ransom & Randolph—have won MJSA Thinking Ahead Awards for innovative product development.) Selecting the right investment can mean the difference between smooth castings and rejects destined for the scrap bin.

GRADE YOUR SUPPLIER

When evaluating your investment and its supplier, consider the following factors suggested by casting expert and writer Paul Coen:

- How long has the investment powder manufacturer been in business?
- Does it have a research staff that works to consistently improve the product?
- Does it have the ability to supply consistent quality, batch to batch?
- Is the powder manufacturer's production capacity sufficient to ensure adequate supplies?
- What is the delivered price per 100 lb. drum or sack of the powder you are now using, compared with the delivered price per 100 lb. drum or sack being offered by other powder manufacturers? Remember, though, that cost is not always a true indicator of quality, although the quality

must be reflected in the price to some extent. Higher prices could be due to high quality ingredients; they could also result from the powder maker's high profit margin or the dealer's markup. (In most cases, however, investment powder is not a high profit item for either the manufacturer or the dealer; high prices usually stem from the rising cost of raw materials.) Lower prices, conversely, could stem from some manufacturers being willing to take a smaller profit margin to increase their market share.

- Do the people who stock and sell the investment powder to you have employees who are knowledgeable about the casting process? Can you get assistance from them when you have a problem?



PHOTO BY GREG GILMAN

TEST, TEST, TEST

Once you've narrowed down your suppliers, how do you select the best powder for your application? Quite simply, put it to the test, says Coen. Don't be afraid to sample other powders to see how well they perform against what you've used for years.

When testing a new investment, obtain sufficient quantities of a brand so that you can give it a fair evaluation in your casting shop. Ask for samples from several different batches of the same investment. Most powder manufacturers put a batch number on each drum or sack, and getting samples from several

different batch numbers will tell you whether the quality carries from batch to batch. (Be sure to follow the supplier's recommendations for using the product.) If the sample powder does the job, compare the delivered price of the new powder against what you're currently paying, and decide from there.

And don't let that testing be the last: Continue to test each new drum of investment that comes into your shop. If it doesn't perform to your standards, exchange it for a new one.

For more tips about how to invest properly—or to contribute your own tips—go to MJSA Journal Online at mjasa.org.



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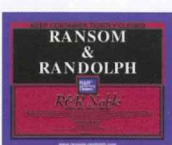
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