

N&V MG-VEST INSTRUCTIONS

Mixing Investment for Refractory Model

- 01 Obtain the proper liquid/water concentration from the chart below
- 02 Pour the necessary amount of powder into a clean, damp mixing bowl
- 03 Pour corresponding amount of liquid/water into bowl on top of powder
- 04 Aggressively hand mix the investment until powder is completely wet
- 05 Mechanically mix under vacuum for 50 seconds

TIP Optimum results are achieved by placing powder in the bowl before the liquid

TIP When mixing large amounts of investment it is important to hand mix the investment completely before mechanically mixing

Pouring the Refractory Model

- 01 Make sure that silicone duplication or hydrocolloid duplication is clean and dry
- 02 Mix appropriate amount of investment
- 03 Pour investment into mould with light vibration
- 04 Once mould is full stop vibrating
- 05 Remove the model from the mould after 30 minutes

TIP When using hydrocolloid duplication it is important to remove the refractory model from the mould after 30 - 45 minutes. If allowed to sit in the hydrocolloid for extended periods of time it will cause investment breakdown

Preparing Refractory Models & Waxing

- 01 The surface of the model should be smooth and waxing can begin if the model is mostly dry
- 02 In most cases a hardening process is not required. Be sure you never use a hot rosin dip with MG-Vest.
- 03 When waxing it is very important to make sure your patterns are completely sealed to the model and no air pockets exist underneath them.

TIP If hardening dip is required we recommend using a cold dip solution.

TIP The use of too much glue when waxing can result in the appearance of flashing along edges of the framework.

Mixing Investment for Investing Refractory Model

- 01 Obtain the proper water concentration from the chart below
- 02 Pour the necessary amount of powder into a clean, damp mixing bowl
- 03 Pour corresponding amount of liquid/water into bowl on top of powder
- 04 Aggressively hand mix the investment until powder is completely wet
- 05 Mechanically mix under vacuum for 50 seconds

TIP When mixing for investing the model you will only use pure water

TIP When mixing large amounts of investment it is important to hand mix the investment completely before mechanically mixing

Investing Refractory Model

- 01 Place prepared model into desired casting ring/former
- 02 Mix appropriate amount of investment to invest the ring (Making sure you are only using pure water)
- 03 Using light vibration pour the investment over the refractory model completely covering the waxed model. Once the model is covered with investment remove from vibrator

TIP When investing the waxed models you may desire a thinner, slower setting mixture to allow you to invest more rings and mix more investment. Therefore, you can use 20 ml of water per 100 grams of powder to achieve a thinner more homogenous mixture

Bench Set

- 01 Allow rings to remain on bench for at least 20 minutes
- 02 Rings should be mostly cool and dry before placing in furnace
- 03 Rings can be allowed to sit for hours or days before placing them directly into a hot burnout furnace

Burnout: Rapid Cast

- 01 Place rings into a hot furnace at temperature indicated by alloy manufacturer
- 02 Do not place rings into furnace over 1050°C (1950°F). If higher temperature is required, raise the temperature once rings are placed inside
- 03 Allow rings to remain at end temperature for 50 - 60 minutes, adding additional time for extra cylinders

Burnout: Traditional

- 01 Place rings in furnace and raise to end temperature at desired heat rate.
- 02 Allow rings to remain at end temperature for 50 - 60 minutes, adding additional time for extra cylinders

General Tips

- 01 We recommend, to keep the best consistency, that you keep the expansion liquid in a refrigerator around 7 - 8°C (44 - 48°F) throughout the entire year. Also, it is best to keep a bottle of water in the same refrigerator, as fresh tap water may be too hot.
- 02 If framework fit is too tight, increase the amount of expansion liquid used and reduce the amount of water used when pouring the refractory model. The opposite changes will remedy loose fitting framework

Special Tips for Using MG-Vest with Light Cured Wax Patterns

- 01 Liquid concentration of 50% expansion liquid and 50% water should be used, with a total of 18 ml per 100 grams of powder.
- 02 Allow rings to bench set for 30 minutes and during burnout they need only remain at end temperature for 30 minutes
- 03 Follow all other instructions as listed

General Properties

Liquid/Powder Ratio: 17-20ml/100 • Working Time: ca. 4 - 5 minutes • Model Set Time: 30 minutes • Cylinder Set Time: 20 minutes

	AMOUNT OF POWDER (1 ENVELOPES = 400 GRAMS)		100 GRAMS OF POWDER (TOTAL 17 ML)		400 GRAMS OF POWDER (TOTAL 68 ML)	
	Concentration		Expansion Liquid (ml)	Water (ml)	Expansion Liquid (ml)	Water (ml)
Refractory Models	60%		10.0	7.0	41.0	27.0
Investing Waxed Model	0%		0.0	17.0	0.0	68.0

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