GENERAL GUIDELINES - RAMMING/HAND-PACKING
R-MAX MP

A. PREPARATION:

1. Use clean tools and equipment. Contamination can affect setting and strength of castables.
2. Application surfaces must be clean and free of foreign (loose material, oil, rust...) matter.
3. Use only clean, cool, 35-60^{o}F, (2-16^{o}C) water suitable for drinking.
4. Use planetary, Hobart-type, mixer. The "B" flat agitator and mixing bowl should be stainless steel.
5. For best results, material and ambient temperatures should be 60-80^{o}F, (16-27^{o}C) during mixing, placing, and setting.

B. MIXING:

1. Place the required amount of material into the mixing bowl, add 5.1% of water by weight. Start mixer at a low agitator speed (Hobart speed 1). After approx. 45 to 60 seconds mixing, increase agitator speed (Hobart speed 2). Total mixing time should be 5 minutes.
2. The batch will stick to the mixing bowl and blade if too much water is used.
3. Wash the mixing and placing equipment periodically with clean water and dry.

C. PACKING:

1. Hand-Pack the material into the area being lined, work as needed to fill all holes, eliminate voids.
2. Trim excess material. Be careful not to cut too deeply into the lining or pull the material away from the anchor metal. Smooth the surface using a trowel, hardwood, or Teflon block, or the palm of the hand. DO NOT apply water.

D. SETTING:

1. Do not disturb lining during the first 24 hour period after installation.
2. Do not spray with water. A curing compound is not required.
3. Protect the lining from the weather if it will be stored for an extended period before use.

E. HEAT-CURING:

R-MAX MP installed in 1 inch thick Hex-Steel can be dried at a rate of 100°F per hour with no hold periods. For thicker linings please contact Resco Products.

Technical Information

GENERAL GUIDELINES - VIBRATION CASTING

R-MAX MP

A. PREPARATION:

1. Use clean tools and equipment. Contamination can affect setting and strength of castables.
2. Waterproof all forms and surfaces. Mold release agents may be used.
3. Use only clean, cool 35°F to 60°F (2°C -16°C) water suitable for drinking.
4. A paddle-type mechanical mixer is preferred.
5. For best results, material and ambient temperatures should be between 60°F to 80°F (16°C - 25°C) during mixing, placing, and setting.

B. MIXING:

1. Mix only as much castable as can be placed immediately. Under ideal conditions, 30 minutes is the maximum recommended placement time. Material left in pails or mortar box may develop a "false" set making it difficult to properly place.
2. Pre-dampen mixer prior to mixing first batch.
3. **INITIALLY ADD 5.5 % BY WEIGHT OF WATER TO MIXER PRIOR TO ADDING CASTABLE.**
4. Mix for approximately 3 to 4 minutes. Then adjust water to obtain the desired consistency. **Typical Water Content will be between 5.5 to 6.5% by weight.** Excess water reduces the strength of the castable proportionately. Total mixing time is 5 to 6 minutes. Mixing time may vary depending upon the type and capability of the mixer.
5. After discharging first castable batch from mixer, load mixer with next water addition and keep mixer paddles turning. Add material when ready. This will minimize castable hardening onto mixer parts.

C. PLACING:

1. This product can be placed with external vibration. When using external vibration, have sufficient air pressure available to be able to run the vibrator at full capacity. Use a regulator on the airline to adjust the vibrator. Adjust the vibrators to produce enough vibration to place, knit, and level the mix. Do not over vibrate, this will segregate the mix.

D. SETTING:

2. Do not disturb lining during the first 24 hour period after installation
2. Do not spray with water. A curing compound is not required.
3. Protect the lining from the weather if it will be stored for an extended period before use.

GENERAL GUIDELINES GUNNING
R-MAX MP

R-MAX MP combines both excellent properties with, low rebound gunning characteristics necessary in a successful "gun mix" product. The following guidelines are suggested:

A. EQUIPMENT:

1. Guns: "Double Chamber", " Rotary" or "Single Chamber Batch Gun"
2. Nozzles: Hamme, Double Bubble or similar
3. Water Ring: "Fan Type" with 0.004" to 0.015" (0.10 mm to 0.38 mm) gap or 16 hole ring
4. Water Valve: 3/8" (9.52 mm)- 8 GMP Needle Valve
5. Air Compressor: 450 - 750 CFM (12.8 – 21.2 m^3/min) compressor typical depending on job.
6. Hoses: Minimum Interior Diameter of 1.25" (31.8 mm) , preferably 1.5" (38.1 mm).
7. Misc.: A 12" to 16" (305 mm to 406 mm) section of hose or nozzle extension between water ring and nozzle provides additional mixing of material and water before reaching nozzle.

B. PRESSURES:

1. Air (Line): psi 43.5 (300 kPa)(minimum) at the "gun" for 86 ft. (26.2 m) of hose. Increase psi 14.5/86 ft. (100 kPa/26.1 m) of additional hose.
2. Water: Use water pump capable of 100 – 300 psi (690 –2068 kPa) (pressure at the nozzle).
3. Misc.: Feed Wheel Rotation (if using a Tachometer) should be 2.5 to 3.5 RPM. Equivalent feed wheel pressure would be approximately 22 psi (151.7 kPa).

C. PRE-DAMPENING:

Pre-Dampening and aging of R-MAX MP is not required unless the contractor prefers this technique to reduce dust levels or to help the material feed more through the gun more smoothly.

D. SETTING:

1. Do not disturb lining during the first 24-hour period after installation
2. Do not spray with water. A curing compound is not required.
3. Protect the lining from the weather if it will be stored for an extended period before use.

E. HEAT CURING:

1. R-MAX MP installed in 1 inch (25 mm) Hex-steel can be dried at a rate of 100°F (56°C) per hour with no hold periods. For thicker linings please contact Resco Products.