ADVANCED CERAMIC CASTABLES

740, 750, 760, 770, 780, 310LF, RTC60 & RTC70

Now, Alumina, Silicon Carbide, Zirconium Oxide, Fused Silica and Insulating Ceramic Foam parts, tubes, crucibles, etc. can be made in minutes. Rescor advanced ceramics are ideal for all your research, prototype and production applications.

MOLDS

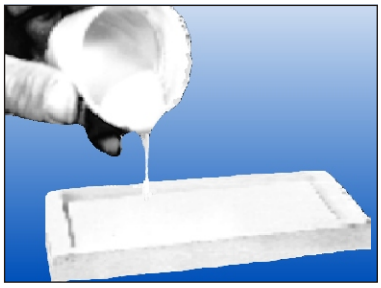
Replicast 101 Liquid Rubber is ideal for molds (see page 67). If metal molds must be used, then design them with sufficient draft so that the cast ceramics can be removed.

Before casting apply a light coat of ***Spray on Mold Release 101MR or 103MR.***
Can also use a thin coat of ***Paste Mold Release 102MR***.

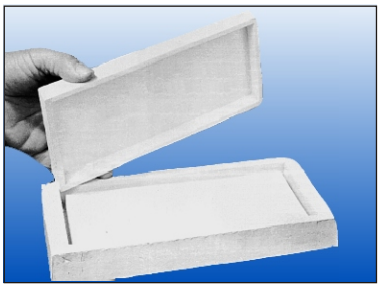
SHRINKAGE

Normal shrinkage will be very small and must be taken into account for all critical applications. See below for typical shrinkage values. (Actual values will vary with individual systems and mix ratios).

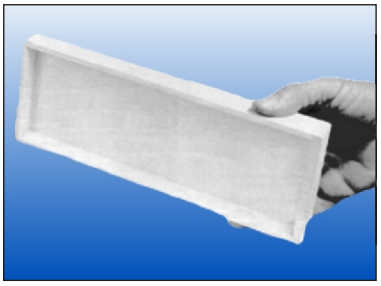
Cure	Typical Shrinkage	Typical Strength
Temperature	(percent)	(modules of rupture)
Room Temp.	0.1 to 0.5	800 - 1200 psi
1000°F (535°C)	0.3 to 1.3	1000 - 2000 psi
1700°F (910°C)	0.5 to 2.0	1500 - 3000 psi
2500°F (1350°C)	1.0 to 2.5	3000 - 7000 psi



Pouring Rescor



Demolding



Alumina Furnace Tray

CERAMIC CASTING

Follow the detailed instructions on the product label. Use the specified base to activator weight ratio.

1. Using the weight ratio as specified on the product label, thoroughly mix the powder portion with its activator to form a thick paste-like consistency.

   For fine details 1% or 2% extra activator (by weight) can be used to increase fluidity. Working time is approximately 10 to 20 minutes.

2. Pour the ceramic mixture into the mold and work it into the corners. Overfill the mold slightly.
3. Vibrate the mold to remove air bubbles. (2-15 minutes should be sufficient).
4. After 20 minutes, remove any excess material with a trowel.
5. Cover the mold with a thin sheet of plastic and cure for 16-24 hours at room temperature.
6. After the room temperature cure heat the ceramic casting for 2 hours at 225°F (110°C). This will remove any excess water and will provide additional strength.
7. A post cure at 1750°F (950°C) will increase the strength 2- 3 times. For parts under 1" thick heat the ceramic casting at a rate of 200°F per hour.
8. For thick castings (over 4" thick) request a special, slow curing instruction sheet.
9. HINT: Make a trial casting in a drinking cup (as a mold) before making the actual part. A trial part 2" diameter x 1" high is ideal. This disc should be heat treated to check product shrinkage and strength before making critical parts.
10. NOTE: A thick paste like consistency is recommended for optimum strength and minimum shrinkage. A thick paste will flow when vibration is applied to the mold and container. The Ceramic Castings will not out gas after it is fully cured.

Mold Making and Ceramic Casting Instructional Video is Available for $25.00