



Mixing and Casting Instructions – Silacast 165RFT

First mix:

- 1. Ensure the mixer is clean and 'Hose it down' before commencing mixing.
- 2. Prepare 10.5% water (calculated on the full dry weight of the mix = weight x 10.5%)
- 3. Prepare another 0.5% water separately, in case it is needed.
- 4. Add 2/3 (two thirds) of the dry castable to the mixer.
- 5. Start mixer and add most of the prepared water into the mixer (around 9%).
- 6. Be <u>patient</u> as the water can take some time to disperse and mix through.
- 7. Once mix is flowing freely in the mixer, add the last remaining 1/3 of dry castable.
- 8. Slowly add the remaining 1.5% water from the 10.5% prepared.
- 9. Allow to mix for 3 4 minutes or until all material looks uniform.
- 10. Mix should now have excellent flow properties, however depending on ambient temperature, it may require the addition of some, or all, of the extra 0.5% water prepared, but only do this if necessary, to get the material to flow freely.

Subsequent mixes:

- 11. Repeat steps 4 9.
- 12. If the material is flowing freely then water addition for subsequent mixes can be reduced by up to 0.5% less than the specified quantity, but should not be increased to more than 0.5% over the maximum specified quantity.

Casting, curing & drying:

- 13. Castable should be discharged into the mould under vibration, either on a vibrating table, or with a pencil type vibrator, ensuring all the air is released out of the mould.
- 14. Once the mould is full, trowel off with a wooden float and cover the exposed (cast) surface with plastic.
- 15. For best results, cure the piece in the mould at 25 40°C (whilst covered with plastic) for 24hrs before stripping.
- 16. Once mould is stripped, move with care and follow the recommended firing cycle:
 - Heat to 120°C at 40°C/hour
 - Hold at 120°C for 1 hour per 25mm lining thickness
 - Heat to 360°C at 20°C/hour
 - Hold at 360°C for 1 hour per 25mm lining thickness
 - Heat to 540°C at 20°C/hour
 - Hold at 540°C for 1 hour per 25mm lining thickness
 - Heat to operating temperature at 40°C/hour