

## Helix TSMR Even Distribution Tests – 30kg/m<sup>3</sup> dosage

The test procedure was carried out as follows:

- 3m<sup>3</sup> concrete mix with 90Kg of Helix added at the batch plant (30Kg/m<sup>3</sup>). This concrete mix was a self-compacting mix with a slump 160mm +.
- During the pour, three concrete cylinder samples were kept – one at the beginning, middle and end of the pour.
- Cylinders are 100mm in diameter and 200mm deep which equates to 0.00157m<sup>3</sup> in volume
- Cylinders were then washed out with only the aggregate and the Helix remaining in the tray.
- Using a magnet, the Helix was collected and weighed accordingly
- The following three results were documented:
  - 49.9 grams = 0.0499kg
  - 49.7 grams = 0.0497kg
  - 47.6 grams = 0.0476kg
- When divided by 0.00157m<sup>3</sup> this equates to a dosage of Helix equalling
  - 31.8kg/m<sup>3</sup> of Helix
  - 31.7kg/m<sup>3</sup> of Helix
  - 30.3kg/m<sup>3</sup>
- This averages out to 31.3kg/m<sup>3</sup> of Helix which is within the +-5% tolerance
- Helix has successfully proven that when mixed in the concrete truck it evenly disperses in the mix allowing for an accurate design and structural behaviour.



*Concrete poured in cylinder*



*Concrete tipped in tray*



**Concrete tipped in tray**



**Concrete hosed down**



**Aggregate and Helix TSMR remain and tipped into tray and Helix TSMR removed with magnet**



**Helix TSMR weighed on scale. Total weight equals 248.2g-200.6g equates to 47.5g**





*Close up of Scale weight of Helix TSMR (including container)*