

TOPROC
ES**upg**

Proven performance

UNITED PLASTICS, RHONDDA

The challenge

United Plastics operates a precision injection moulding facility in Rhondda and appointed Mid Glam Construction to excavate and prepare a base in the heart of the working factory to take two new high pressure injection moulding machines. The challenge was two fold – install a concrete that would give strength capable of accommodating the equipment within as short a time frame as possible and then provide a concrete capable of taking the forces of the two machines in operation. Both presses were mounted on feet and the individual point loading was in excess of 120 tonnes. The employed consultant engineer had designed the base on the proviso that the strength would be measured at 28 days to assess suitability for machine installation. United Plastics couldn't afford to wait that long and wanted to get them running earlier.

Our solution

In order to find a solution to this, Tarmac suggested the use of TOPROC ES, a high performance concrete suitable for use in industrial, commercial and infrastructure construction where high early strength is required. TOPROC ES is a cohesive concrete with a dense micro structure and improved bond between paste and aggregate that imparts benefits including high early and ultimate strength, reduced permeability and increased durability. Mid Glam had experience of the product on other local contracts so this solution allowed them to be confident that the machines could sit on the slab earlier than planned and the client confidence that the material would withstand the loadings,

Results and benefits

88.7m³ of TOPROC ES was supplied and achieved in excess of 50N at 2 days. This allowed the heavy equipment to be off loaded, crane lifted and seated onto the TOPROC ES in less than 7 days, a 21 day improvement on the original design. United Plastics were delighted that they could start utilising the expensive plant earlier, increasing productivity and quality.