



TECHNICAL BULLETIN – TB042

ARDEX RA88 IN THE POOL UNDERWATER REPAIRS TO CERAMIC TILING

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INTRODUCTION & SCOPE

In the 1970's Royal Navy divers carried out repairs to the damaged floor tiling in Eastney Baths at Portsmouth using the original ARDEX GmbH ARDURIT X7. The existing tiles had become chipped and cracked due to impacts of equipment, and restoration was performed with the water kept in the pool, using ARDURIT X7 White.

Historically several repairs had been done using Vibro manufactured ARDURIT X7 in Australia over the years in pools as well. ARDEX no longer manufactures the ARDURIT X7 in Australia however have other solutions.

With improvements in technology, ARDEX epoxy repair products have been introduced into the market. An example of this technology is ARDEX RA88 which is a grey coloured fast cure cartridge adhesive which can be 'gunned' onto tiles which are placed underwater.

THINGS TO CONSIDER ABOUT THIS APPLICATION

When the water level is low, say less than 2 feet (60cm), it is not that difficult to reach down into the water to repair the base or side of the pool. However, in deeper water, and repairs have been done below 2m, this is not practicable and SCUBA or air-line diving equipment is required. At this point, it is obvious that a specialist is required who can dive and lay tiles. Several southern Sydney based tile shops have access to these rare species, but do you? The pool owner then needs to seriously consider whether it might be simpler to empty the pool and do the repairs, given that if one tile is loose, others might be as well, and a thorough inspection may be called for.

The other point to remember is that underwater is a far from an ideal environment to be tiling, with issues such as surface preparation being problematic. Therefore, when using this procedure, installers must keep in mind that this repair will never be as good as a full repair with the pool empty. It is also only applicable to concrete faced pools

PROCEDURE

The damaged tiles are carefully removed, taking care not to damage adjacent intact tiles, and about 2mm to 3mm of the surface of the original bedding is removed to provide a better surface for the new adhesive.

METHOD

Above the water, ARDEX RA88 is applied to the back of the cleaned or fresh tile, with sufficient material applied to achieve at least 90% coverage and to form a bed 2-3mm thick. Sufficient paste needs to be applied around the edges so that the adhesive can be squeezed to reach the grout lines. The tile is pressed into the gap and the RA88 squeezed out around the edges with any excess removed from the grout lines. Where the tile is on a vertical section it needs to be held in place (smaller tiles only) for a period till the bond firms up, or on the pool floor can be weighted down. Epoxy will take longer to cure under water than in the air.



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SUMMARY

The techniques work well for isolated tiles or possibly a couple of tiles with one shared joint. Several tiles must be bedded one at a time, allowing the first adequate time for the adhesive to harden before applying the second and so on. It is obviously important when fixing underwater not to physically agitate the mortar and water too much when bedding the tiles in since you will start to disperse the mortar in the water.

When doing repairs to filled pools in the non-swimming cold months, it needs to be recognised that cold water (below 10 degrees will delay the curing of the adhesive). Conversely heated pools will see the adhesive cure more rapidly.

Always refer to the product TDS for application instructions.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations contact your nearest ARDEX Australia Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

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