

### SPECIFICATION 5

#### PRE-INSULATED ONE PIECE TANKS

The contractor shall supply Pre-Insulated GRP One Piece Tanks manufactured to the requirements of BS EN 13280:2001, and incorporating the quality control requirements of BS EN 13280:2008. The tank shall meet the requirements of the Water Supply (Water Fittings) Regulations 1999 and be approved by WRAS for use with wholesome water.

All internal surfaces to be isophthalic gel coated to make them impervious to water and improve resistance to bacteriological growth. Resin shall be top grade orthophthalic and meet the requirements of BS3532:1990 and the top layer shall be pigmented with either BS 4800 or RAL colour to prevent ultra violet attack. Standard colour is grey 10-A-07. Reinforcement glass to be 'E' glass type and be long stranded (40mm minimum). The proportion of resin to glass shall be no less than 30% w/w. The laminate meets the quality requirements of BS4549-1:1997.

##### Pre-Insulation

The side and roof panels shall be manufactured with an integral polyurethane foam core of either 20mm or 40mm thickness. The foam core shall be sandwiched in the centre of the plate laminate and the completed laminate shall provide a minimum thermal conductance of 1.00 or 0.55 w/m<sup>2</sup>C respectively. The foam shall be both CFC and HCFC free and have an ozone depletion factor of 0.

The external finish shall be totally sealed and be sufficiently robust to withstand normal site handling and transportation.

The pipe connection provisions shall be made during the production process in the positions required and which are acceptable to the manufacturer's tank design.

The tank lids, securely fixed and sealed, shall have a down turned lip at the perimeter of a minimum of 25mm and shall be complete with a screened

cowl vent. Tanks above 1000 litres shall be fitted with a float valve access fitted adjacent to the float valve connection position.

##### Water Test

Tanks are to be factory water tested to a certified QA procedure for a minimum of 24 hours. A test certificate will be completed and signed by the manufacturer. A copy of this Certificate will be filed for future reference.

Any internal bracing, nuts, bolts or washers must be A4 316 Stainless Steel. Any external bracing must be either totally encapsulated within the laminate or if exposed be hot dipped galvanised to BS EN ISO 1461:2009.

Deflection of any strengthening rib or flange must not exceed the lesser of 10mm or 1% of its length. The maximum deflection between any strengthening ribs must not exceed 1.5% of its length.

Tank bases are to be fully supported and shall be flat and level in accordance with the manufacturer's tolerances.

Internal stainless steel ladders and external galvanised ladders shall be fitted to tanks in excess of 1.5 metres depth upon request.

Screened overflows and warning pipes shall be fitted to comply with current water regulations and to satisfy the recommendations of HSE Legionella regulations.

The tank shall be entirely of British manufacture and shall be obtained from:

##### Bristol Water Tanks Ltd

18 Dixon Road, Brislington, Bristol, BS4 5QW.

In accordance with our policy of continuous development, we reserve the right to alter designs and specifications without notice.