5. Lining shall have a smooth glossy finish, be impermeable to gases and liquids and non-conducive to bacteria or fungus growth.
6. Lining shall have good impact resistance, be flexible and have an elongation sufficient to bridge up to 6mm wide settling cracks, which may occur after installation without breaking the lining.
7. Lining shall be capable of being repaired at any time during the life of the structure in accordance with the lining manufacturer's instructions.
8. The lining shall be capable of withstanding a back hydrostatic pressure of 2 bars applied to the under surface of the lining without losing anchorage and without rupture and leakage.
9. All linings shall be factory tested for pin holes using an electrical spark tester set at 20,000 volts minimum. Sheets having holes shall be satisfactorily repaired in the factory prior to delivery.
10. All lining sheets, joints, corner and welding strips shall meet the requirements of Table 10-3 below when tested at a temperature of 43ºC.

Table 10-3:– Physical Properties PVC and HDPE Linings

Property	Test Method	Value
Tensile strength at break	ASTM D638	Min 15 N/mm^2
Elongation at break	ASTM D638	Min 200%
Weld strength at break Shear Peel	 - -	 Min 60 kg/25mm weld Min 35 kg/25mm weld
Hardness, Shore D	ASTM D2240	50
Thickness	-	Min 1.65 mm
Distance between anchors	-	Max 65 mm

10.2.5 GRP Lining

10.2.5.1 Raw Materials

1. Materials used in the manufacture of the lining shall be new stock and of the best quality.
2. Materials shall be free from all defects and imperfections that might affect the performance of the finished product.
3. Resins shall comply with the relevant provisions of BS 3532 Type B, unless otherwise approved by the Engineer. Vinylester resins shall have an elongation at break of 3 to 6%.
4. Glass shall comply with the relevant provisions of the following standards unless otherwise approved by the Engineer. Surface tissues shall also comply with one of