

- F. Where aggressive surface water or sub-soil water exists then the pipes shall be completely internally lined, including the joint faces, with a factory-applied epoxy or polymer coating, HDPE liner or a PVC liner with the following properties:
- I. High molecular weight PVC resin, pigments and plasticisers formulated to retain flexibility during manufacture and in all joint, corner and welding strips.
 - II. PVC resin containing as least 99% by weight of the resin used in the formulation. Copolymer resins are not permitted.
 - III. The liner shall be impermeable to gases and liquids and non-conductive to bacteria or fungus growth.
 - IV. The liner shall have good impact resistance, be flexible and have an elongation sufficient to bridge up to 6mm cracks without damage.
 - V. The liner shall be permanently and physically attached to the concrete by locking extensions embedded in the concrete.
 - VI. The liner shall have a minimum thickness of 1.65mm and be capable of being repaired at any time during the life of the pipeline.
 - VII. The liner shall be capable of withstanding a 1.05kg/cm² back pressure without losing anchorage to the concrete and without rupture or leakage.
 - VIII. The liner sheets, joints, corner and welding strips shall have the following physical properties when tested at 43 0 C: