

Technical Data Sheet

Durability of Thermoplastic PVC Couplings

Thermoplastic couplings are manufactured for use as a permanent part of a system when jointing pipes in sewerage, drainage and other non-pressure applications.

They consist of a flexible PVC sleeve with clamping bands.

The clamp bands are manufactured from stainless steel.

The product is manufactured to the requirements of ASTM C1173. This standard covers material and performance.

Additionally, the sleeve materials meet the requirements of ASTM D5926.

We have to consider three aspects concerning the durability of the product.

- 1) The life of the elastomeric sleeve.
 - 2) The life of the stainless-steel clamp bands.
 - 3) The performance of the product.
- 1) The durability of the elastomer is influenced by many factors such as the type of elastomer, the temperature and the environment in which the elastomer is functioning. Thermoplastic has good general resistance to most ground conditions and is suitable for use in below ground drainage pipe couplings.
 - 2) Thermoplastic is inherently resistant to ozone attack and additional elements used in the compounds add excellent UV resistance. As such these products can be used in above ground environments. Thermoplastic is not suitable for water contaminated with fats, oils, greases and hydrocarbon solvents.

Thermoplastic has an operating temperature range up to 60°C. We recommend that these couplings should not be used for continuous operating temperatures in excess of 40°C to ensure product longevity.

- 3) Stainless steel usually has excellent durability. It can be attacked by chloride ions present in soils by the mechanism of crevice corrosion. If this is considered to be a problem, then the clamps should be wrapped in waterproof tape.
- 4) The clamp bands supplied with the products are strong enough to provide good surface contact between the pipe wall and the seal. Flexseal have been producing these products for over 30 years and have no evidence of premature failure.

We are confident that Thermoplastic Couplings if correctly specified and installed, will have excellent longevity in below ground applications.

Encasing in concrete will not be detrimental to the couplings. There are no chemicals within the concrete that can cause long term degradation of either the elastomeric sleeve or the stainless steel.

Advantages

Strong, resilient and unaffected by soil conditions

Resistant to a wide range of chemicals

Resistant to the environment normally associated with sewers and drains

Flexible PVC has an operating temperature range is -34 deg C/+60 deg C. We recommend continuous operation at 40 deg C. Intermittent at 60 deg C.

Flexible PVC can be used for above ground installations.

Flexible PVC is naturally UV resistant due to the carbon black filler used within the elastomeric material.

All Flexseal PVC Couplings are Phthalate free.

Limitations

Flexible PVC has poor resistance to fats, oil, greases and hydrocarbon solvents.