AEROFLEX

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Best Practices for Direct Burial of AEROFLEX® EPDM Insulation

When flexible closed-cell elastomeric thermal pipe insulation is considered for a direct-bury application, Aeroflex USA recommends the best practice of encasing AEROFLEX® EPDM pipe insulation in a protective conduit such as properly sealed PVC pipe, corrugated drainpipe, or poured concrete for long-term service.

The first concern with a direct-bury installation is likely exposure to ground water (above or below the water table). Long-term water penetration due to poor drainage, coupled with presence of ground water chemicals & contaminants, can reduce the thermal efficiency of the insulation and cause corrosion under insulation of the pipe when ground water seeps in through imperfectly sealed insulation seams and then gets trapped between the pipe and insulation.

Secondly, compression of the insulation under the static load of backfilled soil and rocks can reduce the intended insulation thickness, causing a loss of thermal insulating performance. Simply increasing the wall thickness does not always fully compensate for this factor.

Once a direct-bury installation is backfilled, it is difficult to ever determine if the insulation is performing as intended without protection from these elements.

When the correct insulation thickness is installed, and all seams are completely sealed with AEROFLEX® specialty contact adhesives and Protape®, pipes are protected from long-term exposure to soil acids, ground water chemicals & other contaminants, allowing AEROFLEX® to deliver long-term thermal efficiency to the pipe by managing heat gain/loss, condensation control and potential corrosion.

In an effort to meet owner project requirements and ensure favorable life cycle costs in direct-bury installations, encasing AEROFLEX® in a protective conduit is strongly recommended.

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