

DUAL-GARD 250

Guide Specifications

GENERAL

Underground piping system shall be Ricwil DUAL-GARD 250 and shall consist of integral sealed (nominal) 20-foot long units of fiberglass-reinforced plastic (FRP) (RTRP) pipe insulated with rigid polyurethane foam, which is sealed with a PVC outer jacket and protected on each end with a moisture barrier.

MATERIALS

Basic Pipe Units

Pipe shall be FRP pressure carrier pipe which is made of chemically resistant resins reinforced with fiberglass filament. FRP pipe per ASTM 2996. FRP pipe can also be supplied conforming to military specification MIL-P-28584.

Insulation shall be a rigid 90-95 percent closed-cell polyurethane with a 1.9 to 2.1 pound per cubic foot density and a coefficient of thermal conductivity (K) of .16 BTU/(HR.) (SQ. FT.) (F/IN.) at 73 F.

Jacket shall be HDPE or type 1, Grade 1 Polyvinyl Chloride with a minimum wall thickness of .060 inches.

Joints/Fittings

Unit ends shall be bell and spigot and be joined with a special two-component adhesive supplied in kits containing the proper proportion of resin/catalyst.

Fittings shall be bell-by-bell, made of the same material as that of the carrier pipe, and are to be joined in a similar manner as the pipe, and in accordance with the DUAL-GARD 250 Installation Manual.

INSTALLATION AND TESTING

All pipes, fittings and accessories shall be installed in accordance with the manufacturer's recommendations. The services of a factory-trained field service instructor shall be required. The field service instructor shall be present during the critical stages of the installation and testing.

All steel piping adjoining this system shall be anchored at, or near the point of connection to avoid any external forces on the FRP carrier pipe. The contractor shall pour concrete anchor blocks at every change of direction after testing the pipe. The anchor blocks are to be sized in accordance with forces resulting from thermal stresses, existing soil condition and with the engineer's approval.

Immediately after the system has been installed in the ditch, a partial backfill shall be made in the middle of each unit, leaving the joints exposed for inspection during the hydrostatic tests. Hydrostatic tests of _____ psig shall be required for a period of four hours. No leakage shall be allowed.

After hydrostatic testing, final backfill of selected earth shall be placed and hand-tamped 12" minimum over the top of the jacket . Remainder of the jacket shall be free of large boulders, rocks over 6" in diameter, frozen earth, or foreign matter. The backfill operation shall now be completed by any convenient means. Do not use wheeled or tracked vehicles for tamping.

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