Pro-21® FITTING SPECIFICATIONS

1.0 GPK PVC Pro-21® Sewer Fittings shall be manufactured in accordance with ASTM Standard F-794 or F-1803 from pipe meeting the requirements of either D3034, F-794 or F-1803. The PVC material shall have a minimum cell classification of 12364 or 12454 as defined in ASTM D-1784.

2.0 The purpose of GPK Pro-21® in-line fittings is to convey municipal sanitary and industrial wastes, storm water runoff and many other related applications. They are designed to be used in gravity flow and low pressure applications not to exceed 10.8 psi.

3.0 GPK Pro-21® fittings shall be sized to accommodate Pro-21® sewer pipe (30" - 48") conforming to ASTM F-1803. Fittings are also manufactured to branch and/or adapt to ASTM D-3034 PVC sewer pipe (4" - 30").

4.0 Chemical Resistance. GPK fittings resist attack from certain alcohols, alkalies, salt solutions, acids and other types of chemicals. Refer to chemical resistance chart for suitability.

5.0 Marking. GPK Pro-21® fittings shall be marked with applicable size, company name or logo, Pro-21®, ASTM F-1803 along with manufacturer's date and shift code.

6.0 Testing. A test after installation of either low pressure air (Uni-B-6) or a water infiltration-exfiltration test is recommended.

7.0 Installation. Bedding, backfill and general installation requirements should comply with ASTM D-2321. Further details can be attained from the Uni-Bell Handbook of PVC pipe. Gasket, bells, and spigots shall be cleaned and free of dirt prior to assembly. Lubricants supplied by the pipe manufacturer shall be applied to the spigot surface up to the assembly stop mark including the chamfered end. Spigots should be aligned with the bell and be pushed into place so that the stop mark is just visible adjacent to the bell entry point.

8.0 Service Lines. Normally, service lines from the property line to the collection sewer should be a minimum depth of 3 feet at the property line and should be laid in straight alignment and uniform slope of not less than 1/4" per foot for 4" nominal pipe and 1/8" per foot for 6" pipe. Where collection sewers are deeper than 7 feet a vertical standpipe of stack is permitted but not recommended, consult the project engineer for proper installation details. Deep sewer chimney and risers necessitate extreme care during backfilling. Where surface loading is anticipated the final backfill must be compacted to a density compatible with those surface loads to be encountered.

8.1 Backfilling around pipe service laterals on slope. Extra attention should be given on slopes to prevent the newly backfilled trench from becoming a "French Drain." Before backfilling completely there is a tendency for ground and surface water to follow the direction of the looser soil. This flow may wash out soil from under or around pipe and branch line fittings, reducing or eliminating the support needed. To avoid this problem the backfilling should be of greater compaction. Tamping should be done in 4" layers and continued in this manner all the way up to ground or surface line of the trench. Concrete collars or other concrete poured around the fitting to stabilize unwanted movement is recommended to prevent water from undercutting the underside of the pipe and fittings.

SUMMARY: Due to various ground conditions and different situations, installation techniques vary widely. We warranty our products to be free of manufacturer's defects. We will not replace the products that are installed or used incorrectly. The design of the systems that our product is used in is a factor that cannot be overlooked.

Pro-21® FITTING SPECIFICATIONS

Intro: GPK manufactures Pro-21® PVC sewer fittings to be used in gravity flow or low pressure applications with Pro-21® PVC sewer pipe (sizes 30" - 48" in diameter), conforming to F-1803. Fittings are also produced to branch and/or adapt to ASTM D-3034 PVC sewer pipe (sizes 4" - 30" in diameter).

Material: Fabricated fittings are manufactured from PVC pipe meeting the requirements of ASTM D-3034, F-794, or F-1803 for workmanship, extrusion quality, stiffness, impact resistance, dimensions and structural performance.

Extruded pipe components are made from PVC material with a minimum cell classification of 12454 or 12364 as defined in ASTM D-1784.

Extrusion Quality: Extruded components are tested in accordance with and meet all requirements of ASTM D-2152 for properly fused PVC.

Impact Resistance: Extruded components are tested in accordance with ASTM D-2444 using a 20 lb. Tup A or 30 lb. Tup B and a Flat Plate Holder B to a level of 220 Ft-lbs.

Pipe Stiffness: Extruded components are tested in accordance with ASTM D-2412. The stiffness equals or exceeds the requirements of ASTM D-3034, F-1803 of 46 psi.

Pipe Flattening: Extruded components are flattened as described in ASTM D-3034, F-794 or F- 1803. There shall be no splitting, cracking or breaking.

Pressure/Pressure Deflection: Gasketed joints are tested in accordance with ASTM D-3212.
Pressure: 10 minutes @ 10.8 psi + 10 minutes deflected @ 10.8 psi.
Vacuum: 10 minutes @ 22" Hg + 10 minutes deflected @ 22" Hg.

Joining Methods: Chemically Fused Solvent Welded Joints
Solvent cement is handled and tested in accordance with ASTM D-2564 and D-2855. The Lap Shear Strength shall equal or exceed 900 psi @ 72 hours.

Heat Fusion Welded Joints (Butt Fusion Welds)

Elastomeric Seals (Gaskets)
Must meet all requirements of ASTM F-477 and D-3212.

Reinforced Heat Fusion Welds