

# A-2000™ PVC Pipe

Proven PVC Pipe for Sanitary & Storm Sewer













## A-2000 vs. Polypropylene Pipe

A-2000 is a seamless profile wall PVC pipe extruded with a smooth interior and corrugated exterior. A-2000 provides excellent durability and resistance to abrasion and scour.

A-2000 has a proven track record in a variety of applications including sanitary sewers, storm sewers and subdrainage systems since 1984.

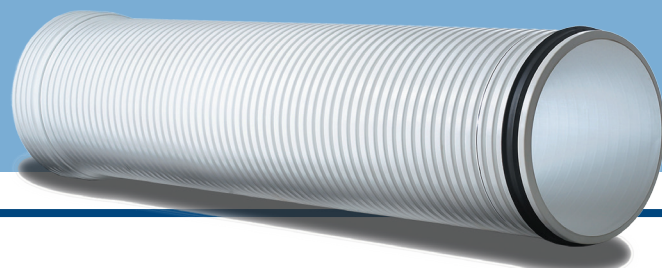


### Sanitary & Storm Sewer Product Comparison

	A-2000™ PVC Pipe	Polypropylene (PP) Pipe
<b>HISTORY</b>	Over Thirty Years	Six Years
<b>LONG TERM MODULUS OF ELASTICITY<sup>1</sup></b>	137,000 psi	27,000 psi
<b>LONG TERM YIELD STRENGTH<sup>1</sup></b>	3,600 psi yield	1,000 psi yield
<b>INNER WALL THICKNESS<sup>2</sup></b> <i>A-2000 PVC HAS NEARLY TWICE THE INNER WALL THICKNESS OF PP</i>	Inner wall thickness of 30" PVC = .130" 	Inner wall thickness of 30" PP = .060" 
<b>HYDRAULICS</b>	Maintains glossy interior under load  	Interior buckles under load   <i>Inner wall buckling under load</i>
<b>COEFFICIENT OF THERMAL EXPANSION AND CONTRACTION</b>	PP has two times the thermal expansion of A-2000 PVC	
<b>PIPE STIFFNESS</b>	White A-2000 PVC reflects heat of the sun	Gray PP absorbs the sun's heat resulting in loss of stiffness
<b>JOINTS</b>	Double seated wide gasket 	Single, thin gasket 
<b>AASHTO MAXIMUM HEIGHT-OF-COVER CLASS 2 BACKFILL AT 90% COMPACTION</b>	36" diameter PVC = 39' cover	36" diameter PP = 16' cover <sup>3</sup>
<b>FIELD CUTS/MODIFICATIONS</b>	EASY » Gasket can be removed and reused on the same pipe. Cuts can be made without significant material waste. 	DIFFICULT » Gasket cannot be removed and reused. When spigot is cut off, the pipe is wasted. 

1. AASHTO LRFD Section 12 - Table 12.12.3.3-1-Mechanical Properties of Thermoplastic Pipe and AASHTO M 330-13 - Standard Specification for Polypropylene Pipe, 12 to 60-in. Diameter  
 2. ASTM F949 - Standard Specification for PVC Corrugated Sewer Pipe With a Smooth Interior and Fittings and AASHTO M330-13 - Standard Specification for Polypropylene Pipe, 12 to 60-in. Diameter  
 3. Refer to Manufacturer's website.

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## A-2000 vs. Polypropylene Pipe

### SUBMITTAL FOR A-2000 PVC PIPE

Please consider this a formal request for your review and approval of A-2000 polyvinyl chloride (PVC) corrugated pipe for sanitary and storm sewer application and inclusion into this project. Contech Engineered Solutions proposes to furnish this pipe as an alternate to the project specified material.

#### 1.0 GENERAL

This specification includes materials, test methods and installation requirements for 4 to 36 inch diameter polyvinyl chloride (PVC) corrugated pipe with a smooth interior.

#### 2.0 PIPE

PVC corrugated pipe with a smooth interior shall conform to the requirements of ASTM Designation F 949 (latest revision). The pipe and fittings shall be homogeneous throughout and free from visible crack, holes, foreign inclusions or other injurious defects. Minimum pipe stiffness when measured in accordance with ASTM Test Method D 2412 shall be 46 psi. The pipe shall be made of PVC compound having a minimum cell classification of 12454 as defined in ASTM Specification D 1784.

Pipe shall be A-2000 as manufactured by Contech Construction Products Inc or approved equal. All other manufacturers of PVC corrugated pipe must be pre-qualified at least 10 days prior to bid opening to be considered as approved material suppliers. Prequalification submittals must demonstrate a minimum 5 years experience of manufacturing proposed pipe material, pipe performance history including a project installation list with at least ten (10) successful sanitary sewer installations in excess of 20,000 LF per project, product literature and installation recommendations.

#### 3.0 FITTINGS

All fittings for PVC corrugated sewer pipe with a smooth interior shall conform to ASTM F 949 (latest revision) Section 5.2.3. To insure compatibility, the pipe manufacturer shall provide all fittings.

#### 4.0 JOINTS

All joints shall be made with integrally formed bell and spigot gasketed connections. All gaskets shall be a single gasket that has two sealing surfaces and indexes two corrugation valleys to ensure water tightness and prevent rolling during installation. Manufacturer shall provide documentation showing no leakage when gasketed pipe joints are tested in accordance with ASTM Test Method D3212. Elastomeric seals (gaskets) shall meet the requirements of ASTM Designation F477.

#### 5.0 INSTALLATION

PVC corrugated pipe shall be installed in strict accordance with ASTM D2321. Class I material shall be used in the bedding, haunch zone and initial backfill zone to an elevation 6" over the top of the pipe. including sanitary sewers, storm sewers and subdrainage systems since 1984.

