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## PLASTIC PIPE

### **GENERAL**

Plastic pipe shall be manufactured from Polyethylene (PE), Poly vinyl chloride (PVC), or Acrylonitrile-Butadiene-Styrene (ABS) material. Plastic PE pipe, couplings, and fittings for storm sewers, sanitary sewers or culverts shall meet the requirements of Section 4146 of the Standard Specification of the Iowa Department of Transportation.

Acceptance of these materials will be based on certification of compliance from an approved manufacturing plant and from test results on periodic, random, monitor samples or on project sampling and testing.

### **MANUFACTURING PLANT APPROVAL**

Application for plant approval shall be made, in writing, to the Office of Materials in Ames, Iowa, and shall include product technical information and a description of product quality control procedures. One sample of each diameter pipe requested by the Office of Materials shall be submitted with the application. The length of the sample shall be at least 3.5 times the internal diameter. A report of successful NTPEP / AMRL Plant Audit may be used instead of Plant inspection.

Approval will be based on sample test results and evaluation of quality control procedures. The District Materials Engineer responsible for material acceptance in the plant location area may inspect plant facilities and procedures and recommend approval when assured qualifications are met.

At the end of every calendar year each approved manufacturer shall give a statement summarizing the usage to the Manufactured Materials Engineer in the Office of Materials. The statement shall contain the description, length and diameter of the pipes supplied to various Iowa DOT projects during the year.

Plants approved for plastic pipe for sewers or culverts are listed in Appendix A.

### **CERTIFICATION PROCEDURE**

The approved manufacturer shall furnish, with each shipment, a certified bill of materials or invoice which identifies the contractor, project number, number of meters (feet) of pipe of each size, and number of pieces of couplings and fittings. Jobbers or other suppliers of material from an approved manufacturer shall furnish the above information along with a certificate of compliance from the approved manufacturer. The certificate of compliance shall be stated as follows:

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The materials itemized in this shipment are certified to meet the requirements of the applicable specifications of the Iowa Department of Transportation.

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(Authorized Signature and Date)

A responsible company representative shall sign the certification statement.

One copy of the certified bill of materials or invoice shall accompany each shipment and shall remain at the delivery point for the project inspector or shall be forwarded directly to the project engineer. In addition, one copy shall be forwarded to the District Materials Engineer with project responsibility and one copy to the Office of Materials in Ames.

### **PROJECT SAMPLING & TESTING FOR PLASTIC PIPE NOT LISTED IN APPENDIX A**

Approval samples taken for a project shall consist of the same number and lengths as described for plant approval. The sample shall contain the date and plant code.

Whenever possible, samples shall be taken at the plant or from stock prior to shipment to the project. The supplier should notify the District Materials Engineer with project responsibility, of pending shipments so that sampling can be arranged. Shipments of materials that have not been sampled for the project shall include extra lengths for sampling at the project site.

### **MONITOR SAMPLING & TESTING**

The District Materials Engineer will be responsible for designing and performing a monitor inspection and testing program for each approved plant. The amount of monitor sampling and testing will generally depend upon the amount of material supplied by each manufacturer and upon the time since the last sample was obtained.

A monitor test sample shall consist of the same number and lengths as described for plant approval. Deficient test results or poor workmanship on any monitor sample may be considered sufficient cause for removing a plant from the list of approved suppliers.