



Designation: D 2311 – 77 (Reapproved 1981)

Standard Specification for PERFORATED, HOMOGENEOUS BITUMINIZED FIBER PIPE FOR GENERAL DRAINAGE¹

This standard is issued under the fixed designation D 2311; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers solid wall and perforated standard strength drain pipe which installed in granular, select backfill is used for general wet spot drainage such as: land reclamation, curtain and building foundation drains, under basement floors, sump conductor, downspout runoff, swimming pools, etc.

NOTE—The values stated in SI units are to be regarded as the standard.

2. Applicable Documents

2.1 ASTM Standard:

D 2314 Testing Homogeneous Bituminized Fiber Pipe²

3. Materials and Manufacture

3.1 Pipe and couplings shall be composed of an interwoven fibrous structure thoroughly impregnated with a bituminous compound. The wall of the pipe shall be dense and homogeneous, without seams or laminations, and with a smooth interior surface free of obstructions and rough or flaky areas. Bends and fittings shall be of the same material as the pipe, or of a material having equal or better physical and chemical characteristics.

3.2 Pipe and fittings shall use either of the following joint systems:

3.2.1 *Type TJ Joints*—Pipe and fittings shall be provided with accurately machined or molded tapered joints, and a taper-sleeve coupling shall be provided for each length of pipe and for each fitting where applicable. The slope of the taper in both pipe and

coupling shall be 2 deg (4 deg included angle) (see Fig. 1).

3.2.2 *Type BJ Joints*—Pipe and fittings shall have squarely cut ends, and a split-collar coupling or an internal coupling shall be provided for each length of pipe and for each fitting where applicable.

4. Chemical and Physical Requirements

4.1 *Chemical Resistance*—The specimen shall show no evidence of chemical reaction or deterioration of impregnant.

4.2 *Water Absorption*—The maximum water absorption shall be 2 % of the original weight, calculated to the nearest 0.1 %.

4.3 *Kerosine Resistance*—Specimens shall meet the crushing strength requirements specified in 4.6.

4.4 *Heat Resistance*—The heat shall not cause a weight loss over 1 % in the specimen due to exudation of the impregnant.

4.5 *Resistance to Flattening*—The decrease in diameter shall be not more than 3 %.

4.6 *Crushing Strengths*—The requirements for dry and wet crushing strengths shall be not less than 11.7 kN/m (800 lbf/ft) for all sizes.

5. Dimensions

5.1 *Type TJ Pipe and Couplings*—The di-

¹ This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.16 on Bituminized Fiber Pipe.

Current edition approved Sept. 30, 1977. Published November 1977. Originally published as D 2311 – 64 T. Last previous edition D 2311 – 73.

² *Annual Book of ASTM Standards*, Part 15.