



Standard Specification for CELLULOSE ACETATE BUTYRATE (CAB) PLASTIC PIPE (SDR-PR) AND TUBING¹

This Standard is issued under the fixed designation D 2446; 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.

^c NOTE—Editorial changes were made throughout in July 1978.

1. Scope

1.1 This specification covers cellulose acetate butyrate (CAB) pipe made in standard thermoplastic pipe dimension ratios. The CAB tubing covered by this specification is made in accordance with the dimensions shown in Tables 5 and 6. The CAB pipe and tubing described in this specification are pressure rated for water (see Appendix). Included are criteria for classifying a CAB plastic pipe and tubing material, CAB plastic pipe and tubing, a system of nomenclature for CAB plastic pipe and tubing, and requirements and test methods for materials, workmanship, dimensions, sustained pressure, burst pressure, and flattening. Methods of marking are also given.

NOTE 1—The values in parentheses are for information only.

2. Applicable Documents

2.1 This specification references the following documents, which form a part of this specification to the extent specified herein:

- D 618, Conditioning Plastics and Electrical Insulating Materials for Testing²
- D 707, Specification for Cellulose Acetate Butyrate Molding and Extrusion Compounds³
- D 883, Definitions of Terms Relating to Plastics²
- D 1598, Test for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure³
- D 1599, Test for Short-Time Rupture Strength of Plastic Pipe, Tubing, and Fittings³

D 1600, Abbreviations of Terms Relating to Plastics²

D 2122, Determining Dimensions of Thermoplastic Pipe and Fittings³

F 412, Definitions of Terms Relating to Plastic Piping Systems³

3. Definitions

3.1 *General*—Definitions are in accordance with Definitions D 883 and F 412, and abbreviations are in accordance with Abbreviations D 1600, unless otherwise indicated. The abbreviation for cellulose acetate butyrate plastic is CAB.

3.2 *standard thermoplastic pipe dimension ratio (SDR)*—the ratio of pipe diameter to wall thickness. For CAB pipe it is calculated by dividing the average outside diameter of the pipe in millimetres (or inches) by the minimum wall thickness in millimetres (or inches). If the wall thickness calculated by this formula is less than 1.52 mm (0.060 in.), it shall be arbitrarily increased to 1.52 mm (0.060 in.). The SDR values shall be rounded to the nearest 0.5.

3.3 *hydrostatic design stress*—the estimated maximum tensile stress in the wall of the pipe or tubing in the circumferential orientation due to internal hydrostatic water pressure that

¹ This specification is under the jurisdiction of ASTM Committee F-17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F 17.11 on Composite.

Current edition approved Jan. 29, 1973. Published March 1973. Originally published as D 2446-65. Last previous edition D 2446-68.

² Annual Book of ASTM Standards, Part 35.

³ Annual Book of ASTM Standards, Part 34.