

Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)¹

This standard is issued under the fixed designation D 2444; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This test method covers the determination of the impact resistance of thermoplastic pipe and fittings under specified conditions of impact by means of a tup (falling weight). Three interchangeable striking noses are used on the tup, differing in geometrical configuration. Two specimen holders are described.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values in parentheses are provided for information purposes only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 618 Practice for Conditioning Plastics for Testing²

D 2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings³

F 725 Practice for Drafting Impact Test Requirements in Thermoplastic Pipe and Fitting Standards³

3. Significance and Use

3.1 The impact resistance of thermoplastic pipe and fittings relates to suitability for service and to quality of processing. Impact resistance may also provide a relative measure of a material's resistance to breakage during handling and installation and, for non-buried applications, to in-service breakage. See Appendix X4 for guidelines for selecting testing combinations.

3.2 Results obtained by use of this test method can be used in three ways:

3.2.1 As the basis for establishing impact test requirements in product standards,

3.2.2 To measure the effect of changes in materials or processing, and

3.2.3 To measure the effect of the environment.

4. Apparatus

4.1 *General*—One type of impact tester is illustrated in Fig. 1.

4.2 Tup:

4.2.1 The tup nose shall be as shown in Fig. 2. When used with the 0.50-in. (12.7-mm) radius nose, it is designated as Tup A. When used with the 2.00-in. (51-mm) radius nose, it is designated as Tup B. When used with the 0.25-in. (6.3-mm)

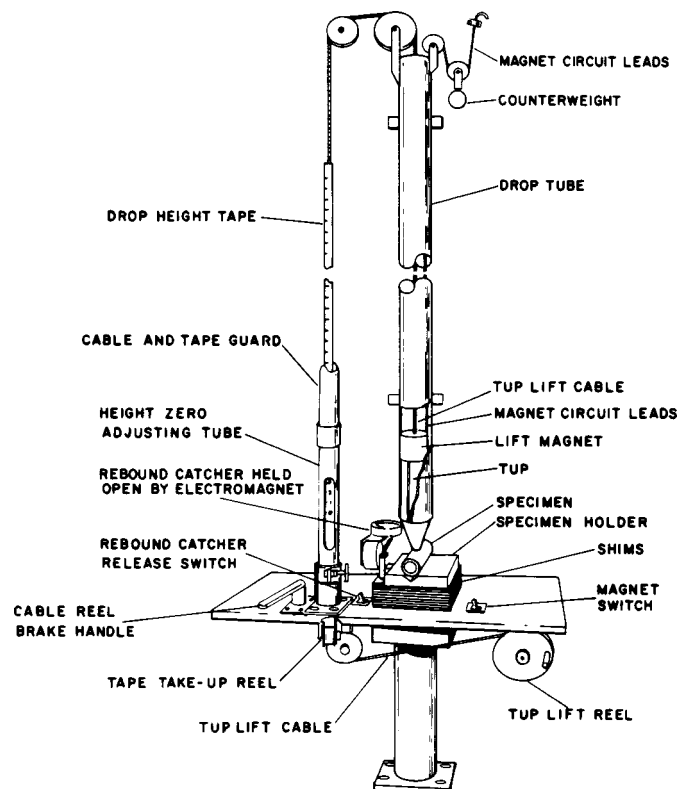


FIG. 1 One Type of Tup Impact Tester

¹ This test method is under the jurisdiction of ASTM Committee F-17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.40 on Test Methods.

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² Annual Book of ASTM Standards, Vol 08.01.

³ Annual Book of ASTM Standards, Vol 08.04.