



Designation: C 581 – 003

An American National Standard

Standard Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service¹

This standard is issued under the fixed designation C 581; 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 practice is designed to evaluate, in an unstressed state, the chemical resistance of thermosetting resins used in the fabrication of reinforced thermosetting plastic (RTP) laminates. This practice provides for the determination of changes in the properties, described as follows, of the test specimens and test reagent after exposure of the specimens to the reagent: hardness of specimens, weight change thickness, appearance of specimens, appearance of immersion media, and flexural strength and modulus.

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

NOTE 1—This practice may also be used to evaluate other factors, such as surfacing veils, the effect of resin additives, and fabrication variables on the chemical resistance of the resin.

NOTE 2—There is no similar or equivalent ISO standard.

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 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

¹ This practice is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.23 on Reinforced Plastic Piping Systems and Chemical Equipment.

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