Designation: C 557 – 03ε1

Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing[1]

This standard is issued under the fixed designation C 557; 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.

ε[1] NOTE—Editorial changes were made throughout in May 2006.

1. Scope*

1.1 This specification includes properties and covers minimum performance standards for adhesives intended to bond the back surface paper of gypsum wallboard to wood framing members.

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

1.3 This specification also covers test requirements and test methods for the adhesive used for the application of all thicknesses of gypsum wallboard.

1.4 *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:* [2]

C 1396/C 1396M Specification for Gypsum Board

D 905 Test Method for Strength Properties of Adhesive Bonds in Shear by Compression Loading

D 907 Terminology of Adhesives

E 4 Practices for Force Verification of Testing Machines

E 177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3. Terminology

3.1 *Definitions*—Many terms in this specification are defined in Terminology D 907.

4. Significance and Use

4.1 The specification applies to adhesives for bonding the back surface paper of gypsum wallboard of any thickness to wood-framing members.

4.2 This specification provides a basis for ensuring the quality of the adhesives.

4.3 Although the bonds rendered by these adhesives shall have enough strength by themselves to maintain the bond between adherends, they are not intended as a substitute for the common practice of using mechanical fasteners to maximize integrity of drywall-wood-framing structures.

4.4 The tests are suitable for products performance certification and quality control programs and can be useful to the general public, adhesive manufacturers, distributors, specifiers, architects, contractors, testing laboratories and other businesses and professionals

4.5 The results do not include all possible conditions, which may occur during final assembly, but indicate a set of performance characteristics for laboratory controlled bonding variables.

5. Adhesive Physical Property Requirements

5.1 *Adhesives*—The adhesives shall be uniform, homogeneous mixtures of elastomeric polymers or viscoelastic resins, or both, free of lumps or foreign matter.

5.1.1 *Workability*—When applied to the framing member with a caulking gun or notched trowel, or both, in accordance with the manufacturer's instructions, the adhesive shall exhibit a consistency capable of ensuring non-sagging properties.

5.1.2 *Open Time*—The adhesive shall have an open assembly time of between 10 to 20 min to give the user sufficient

[1] This specification is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.70 on Construction Adhesives.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

***A Summary of Changes section appears at the end of this standard.**

time to apply and, if necessary, reposition the gypsum wallboard at ambient temperatures, ranging from 40 to 100°F (4 to 38°C).

5.1.3 *Storage Life*—The adhesive shall remain serviceable and meet all the requirements of this specification for not less than six months after delivery, when stored in original unopened containers at temperatures ranging from 40 to 85°F (4 to 30°C).

6. Adhesive Performance Property Requirements

6.1 The adhesives shall conform to the requirements summarized in Table 1.

7. Sampling

7.1 The test adhesive sample size of 1 qt (approximately 1 L) is a minimum amount to complete one full series of testing. The sample is to be handled and stored according to the manufacturers recommendations. For qualification testing, the sample is to be representative of the final product for which recognition is sought.

8. Materials and Apparatus for Conducting Tests

8.1 *Gypsum Wallboard*—½-in. (12.7 mm) thick, complying with Specification C 1396/C 1396M; the dimensions are specified in each test.

8.2 *Plywood*—⅝-in. (15.9 mm) or 19⁄32-in (15.1 mm) U.S. Product Standard PS-1-95 grade marked stamped commercial plywood, Group 1 Species, exterior glue, or sanded exterior grade plywood, underlayment type, with A grade face ply for the adhesion surface.

8.3 *Douglas-fir Dimension Lumber*—Nominal 2 by 4, 1½ by 1½ by 3½-in. (38.0 by 38.0 by 89.0 mm); No. 1, straight-grained, and knot-free; the dimensions are specified in each test.

8.4 *Polyvinyl Acetate Adhesive*—Any commercially available product.

8.5 *Spacers*—No. 20 gauge (American Standard or B&S) bronze or brass wire 1⁄32-in. (0.8-mm) diameter.

8.6 *Trowels*—Plastic or metal with 3⁄16-in. (4.76 mm) deep V-notches.

8.7 *Compression Shear Test Fixture*—A compression-shear apparatus that is similar to, but of a larger scale than the fixture recommended in Test Method D 905. A similar fixture is shown in Fig. 1.

8.8 *Tensile Test Fixture*—An assembly of one 5 by 5 by ½-in. (127 by 127 by 12.7 mm) thick steel plate and two 1½ by 1½-in. by ¼-in. thick by 6 in. long (38.1 by 38.1 by 6.4 mm thick by 152 mm long) steel angle sections. See Fig. 2.

8.9 *Scaffold Nails*—6d, common, double-head, smooth shaft, 0.113-in. (2.87 mm) diameter, 2 in. (51 mm) long.

8.10 *Testing Machine*—Any suitable testing machine that is capable of operation at a constant rate of motion of the moveable head and has a force measurement accuracy of ±1 % when calibrated in accordance with Practices E 4.

8.11 *Wood Screw with Eyelet*—#6 by 1 ½-in. (38.1 mm) long, with a ⅜-in. (9.5 mm) inside diameter eyelet.

8.12 *Plywood Shim*—⅝-in. (15.9 mm) or 19⁄32-in. (15.1 mm) thick plywood with dimensions of 4 by 3½ in. (101.6 by 88.9 mm) for shear test specimens and 4 by 4 in. (101.6 by 101.6 mm) for tensile test specimens.

9. Conditioning of Materials and Specimens (Standard Conditions)

9.1 Condition the gypsum wallboard, plywood, and Douglas-fir, lumber to a constant weight at 73 ± 2°F (23 ± 1°C) and 50 ± 5 % relative humidity, unless specified otherwise.

TABLE 1 Adhesive Properties and Performance Requirements

Test Method	Reference Number	Property	Condition	Requirements
Rate of shear strength development	10.1.4	shear strength	24 h at Std. Cond.	10 psi (69 kPa) min
	10.1.5	shear strength	14 days at Std. Cond.	40 psi (276 kPa) min
	10.1.6	shear strength	14 days at Std. Cond., + cyclic lab exposure, + 2 days at Std. Cond.	32 psi (220 kPa) min
	10.1.7	shear strength	(a) 178 N (40 lbf) for 24 h at Std. Cond.	no bond separation
			(b) 89 N (20 lbf) for 24 h at 100°F	no bond separation
Rate of tensile strength development	10.2.3	tensile strength	24 h at Std. Cond.	15 psi (103 kPa) min
	10.2.4	tensile strength	14 days at Std. Cond.	25 psi (172 kPa) min
Adhesive open-time determination	10.3	open-time	24 h at Std. Cond.	75 % paper transfer, min
Substrate wet-out by adhesive				
1. Plywood	10.4.1	wet-out	spatula applied	good wetting property
2. Wallboard	10.4.2	wet-out	spatula applied	good wetting property
Bridging	10.5	gap filling	48 h at Std. Cond.	adhesive bond line is maintained - report paper failure %
Accelerated adhesive aging	10.6	accelerated aging	500 h at 70°C (158°F)	no fracture into separate pieces
Freeze-thaw stability †	10.7	low-temperature storage	3 cycles of: 24 h at -17°C (0°F) + 24 h at Std. Cond.	no change in workability; 10 psi (69 kPa) shear strength, min
Suitability as a laminating adhesive for vinyl-covered wallboard	10.8.1	compatibility	24 h at 38°C (100°F)	no blistering, vinyl-film discoloration, or bond failure
	10.8.2	staining	1 h at Std. Cond.	no swelling or discoloration

† Corrected editorially.

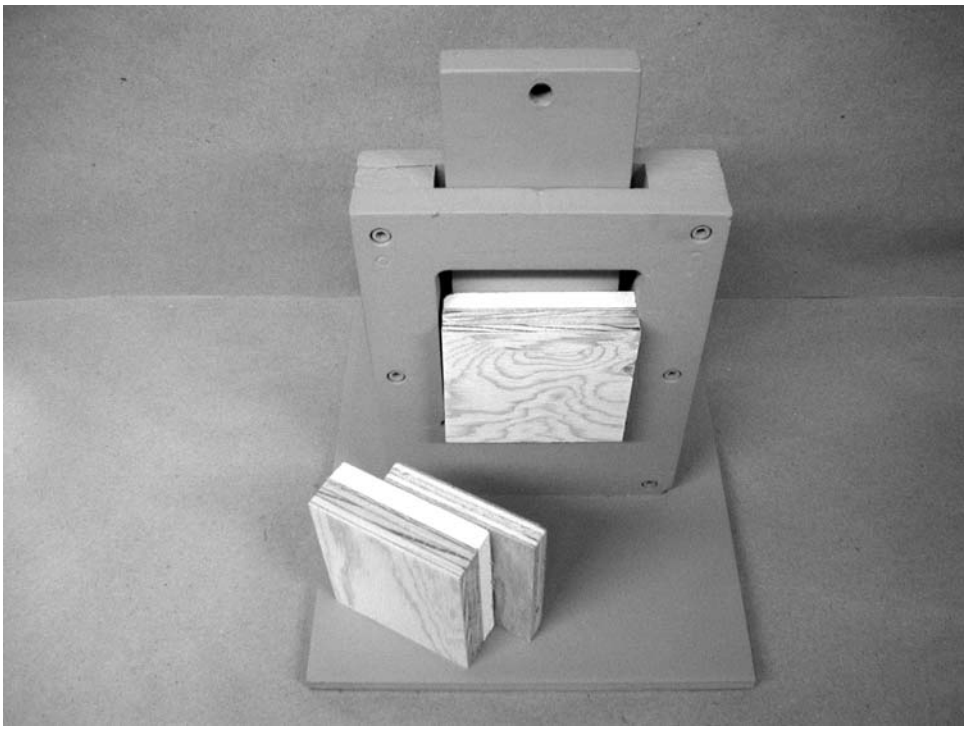

FIG. 1 Shear Strength Test Specimen in Text Fixture

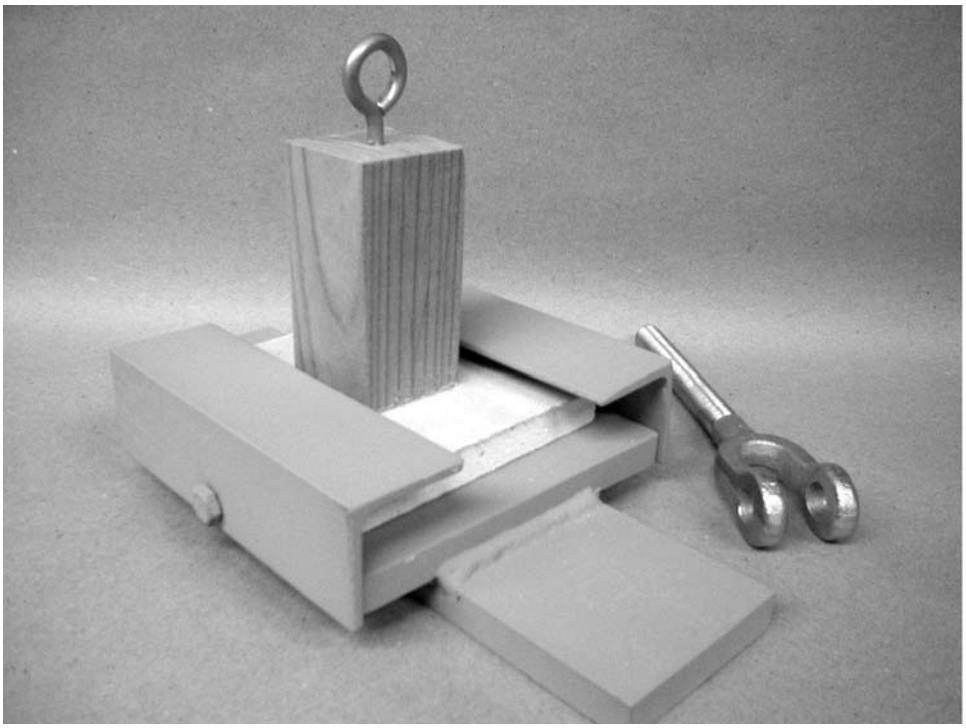

FIG. 2 Tensile Strength Specimen in Text Fixture

9.2 Subject all test adhesives and test specimens to standard conditioning for time period indicated at 73 ± 2°F (23 ± 1°C) and 50 ± 5 % relative humidity unless specified otherwise.

10. Test Methods

10.1 *Shear Strength (Rate-of-Shear Strength Development)*:

10.1.1 *Preparation of Gypsum Wallboard-Plywood Laminates*—Each laminate is constructed by bonding a piece of 4 by 3½ by ½ in. thick (102 by 89 by 12.7 mm) gypsum wallboard front paper surface paper to a ⅝-in. (15.9 mm) or 19⁄32-in. (15.1 mm), plywood shim of the same dimensions with a commercially available PVA adhesive. The plywood reinforces the gypsum wallboard to prevent fracture before the ultimate shear load can be achieved. The grain of the gypsum wallboard back surface paper is parallel with the 3½-in. (89 mm) direction.

10.1.2 *Preparation of Shear Strength Test Specimens*—Prepare the number of test specimens indicated in10.1.4-10.1.7 by bonding a 4 by 3½ in. (102 by 89 mm) piece plywood to the previously prepared wallboard-plywood laminate as follows:

10.1.2.1 Spread the test adhesive onto the plywood bonding surface with a trowel having 3⁄16-in. (4.8-mm) deep V-notches so that the adhesive ridges are parallel to the grain of wood. During application hold he trowel at an approximate 90° angle to the receiving surface.

10.1.2.2 Allow an open time of 30 s ± 5 s upon completion of spreading.

10.1.2.3 Squarely position the gypsum wallboard-plywood laminate back surface paper onto the adhesive coated plywood with the overlapping 2½ ± 1⁄16-in. (63.5 ± 1.6 mm), thus forming the 10 in.^{2}(64.5 cm^2) bonded area. See Fig. 3.

10.1.2.4 Insert six wire spacers No. 20 gauge at least 2-in. (51.0-mm) long in the joint 1-in. ± 1⁄16-in. (25.4 ± 1.6 mm). Position the spacers so that one is on the centerline of the bonded area (perpendicular to the ridges), and the others are 1 in. (25.4 mm) away from the center spacers and parallel to it.

10.1.2.5 Immediately following assembly, compress each test specimen under a uniformly distributed load of 15 lb (67 N) for a period of 3 to 3 ½ min.

10.1.2.6 After the 3 to 3-½ min period, remove the load, wipe the excess adhesive from the bonded edges with a square-edged spatula, and withdraw the spacers, taking care not to disturb the alignment of the bonded pieces.

10.1.3 *Shear Strength Determination*—After completing the appropriate conditioning, test the specimen in shear using a compression-shear test fixture as shown in Fig. 1. The bottom edge of the wallboard-plywood laminate rests on self-aligning seat as the test loading is simultaneously applied to the top edge of the single plywood. The stress applied is parallel and uniformly distributed to the bond line shear plane and requires careful orientation using shims and self-aligning apparatus as necessary. Determine the shear strength at a crosshead speed of 0.50-in/min (12.7 mm)/min). Observations are made during stress application to ensure the test assembly maintains proper alignment and the fixture operates without binding or friction throughout the test. Record the maximum shear strength and the average shear strength for the 24 h, 14–day, cycle exposure, and static load test conditions.

10.1.4 *Shear Strength After 24 h*:

10.1.4.1 Prepare five shear test specimens using the procedure outlined in 10.1.1 to 10.1.2.

10.1.4.2 After curing the shear test specimens 24 h ± 1 h at standard conditions, determine the shear strength in accordance with 10.1.3.

10.1.5 *Shear Strength After 14 Days*:

10.1.5.1 Prepare five shear test specimens using the procedure outlined in 10.1.1 to 10.1.2.

10.1.5.2 After conditioning the specimens 14 days at standard conditions, determine the shear strength in accordance with 10.1.3.

10.1.6 *Shear Strength After Cyclic Exposure*:

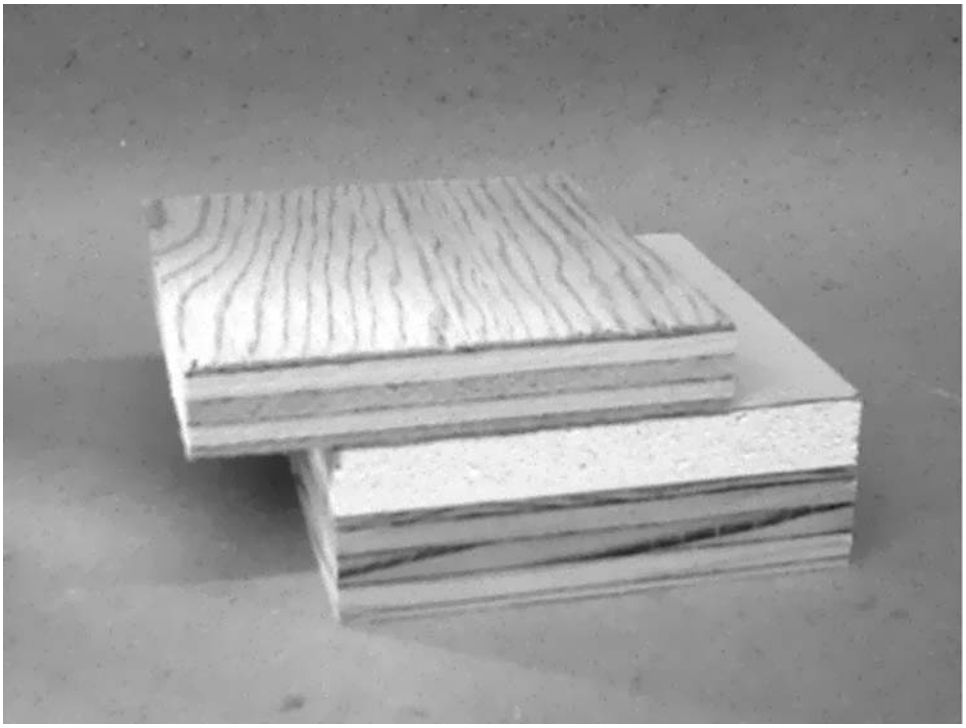

FIG. 3 Shear Strength Test Specimen Assembly

10.1.6.1 Prepare five shear test specimens using the procedure outlined in 10.1.1 to 10.1.2.

10.1.6.2 After conditioning the shear test specimens 14 days at standard conditions, process the shear test specimens through four complete cycles (Table 2). Store the shear test specimens at standard conditions for 24 h after each cycle.

10.1.6.3 At the end of the cycling, condition the test specimens for 2 days in standard conditions and determine the shear strength in accordance with 10.1.3.

10.1.7 *Shear Strength for Static Load*:

10.1.7.1 Prepare ten shear test specimens using the procedure outlined in 10.1.1 to 10.1.2.

10.1.7.2 Condition the shear test specimens 14 days at standard conditions.

10.1.7.3 Subject five shear test specimens to a static load of 40 lbf (178 N) at 73 ± 2°F (23 ± 1°C) and five shear test specimens to 20 lbf (89 N) at 100.2 ± 2.0°F (38 ± 1°C) for a period of 24 h. When testing, the wallboard/plywood laminate should be fixed to a rigid frame. The full test load is applied to the unsupported single plywood side of the adhesive bondline.

10.1.7.4 At the end of the 24 h period, examine the test specimen bondline for indication of separation. Such separation is regarded as a failure.

10.2 *Tensile Strength (Rate of Tensile Strength Development)*:

10.2.1 *Preparation of Tensile Test Specimens*—Prepare each tensile test specimen as follows:

10.2.1.1 Prepare the number of test specimens indicated in 10.2.3 and 10.2.4. Each tensile test specimen consists of a 4 by 4 by ½ in. (101.6 by 101.6 by 12.7 mm) thick gypsum wallboard, and 1½ by 1½ by 3½ in. (38 by 38 by 89 mm) Douglas-fir lumber block. See Fig. 4. If necessary reinforce the gypsum wallboard by constructing a gypsum wallboard-plywood laminate for testing with the method described in 10.1.1. Drill a pilot hole for the wood screw with eyelet at the approximate center into the Douglas-fir block end face. The pilot hole is drilled straight and parallel with the block's length. The wood screw with eyelet will be used for connecting the test specimen to the test machine. Install the wood screw into the pilot hole with sufficient thread engagement to withstand the tensile force application.

10.2.1.2 Bond the wallboard back surface paper to the Douglas-fir block by applying full coverage with sufficient adhesive to cause uniform squeeze-out of excess adhesive on all sides when the bond area is compressed to a line thickness of approximately 1/32 in. (0.8 mm).

TABLE 2 Cyclic-Exposure Conditioning for Shear-Test Assemblies (See 10.1.6)

Time, h	Temperature °C (°F)	Relative Humidity, %
4	38.0 (100)	85 ± 2
4	4.5 (40)	uncontrolled
16	50 (122)	uncontrolled

NOTE 1—Four complete aging cycles to be used.
NOTE 2—Room temperature storage required over weekends.

10.2.1.3 Insert and position two wire spacers, No. 20 gauge, at least 3 in. (76 mm) long into the bonded area with the spacers positioned ¼ in. (6.3 mm) from each edge of the wood block.

10.2.1.4 Compress the bonded area of each tensile test specimen immediately under a load of 5 lb ± 0.1 lb (22 N) for 3 min.

10.2.1.5 Scrape all excess adhesive away from edges using a square-tipped spatula. Remove the weight and next the spacers, taking care to avoid disturbing the alignment. See Fig. 4.

10.2.2 *Tensile-Strength Determination*—Determine the tensile strength of the adhesive on a testing machine capable of providing loading at a rate of 60 lbf (267 N)/min. Position the tensile test specimen with the Douglas-fir wood block centered between the angles. Refer to Fig. 2. The tensile test fixture is mounted to a permanent base and includes self-alignment features to ensure the stress application is perpendicular to the joint until failure. Connect the tensile test specimen to the test machine by connecting the tension rod with clevis to the wood screw with the eyelet. Ensure the test assembly maintains proper alignment throughout the test. Record the maximum tensile strength of each specimen and the average tensile strength for the 24 h and 14 day tests.

10.2.3 *Tensile Strength After 24 h*:

10.2.3.1 Prepare five tensile test specimens using the procedure outlined in 10.2.1.

10.2.3.2 After conditioning the tensile test specimens 24 h at standard conditions, determine the tensile strength in accordance with 10.2.2.

10.2.4 *Tensile Strength After 14 Days*:

10.2.4.1 Prepare five tensile test specimens using the procedure outlined in 10.2.1.

10.2.4.2 After conditioning the tensile test specimens 14 days at standard conditions, determine the tensile strength in accordance with 10.2.2.

10.3 *Adhesive Open-Time Determination*:

10.3.1 Prepare five open-time specimens as follows:

10.3.1.1 Using a suitable template (Fig. 5), spread a uniform bead of adhesive ⅜ by ⅜ by 2 in. (9.5 by 9.5 by 51 mm) long on the back paper surface of a 2 by 4 in. (51 by 102 mm) piece of gypsum wallboard that has been conditioned for 24 h at standard conditions.

10.3.1.2 After conditioning the assembly for 30 min ± 1 min at standard conditions, position a 2 by 4 in. (51 by 102 mm) piece of gypsum wallboard centrally over the bead and before compressing the adhesive, rotate the top piece 90 degrees thus creating an X-figure overlay. Immediately place a 5 lb ± 0.1 lb (22 N) weight on the assembly. Remove the weight after 30 min.

10.3.1.3 After a period of 24 h under standard conditions, pull the assembly apart.

10.3.1.4 Examine the test specimen bonded area for percent of transfer and paper failure. Report the average for the five test specimens.

10.4 *Substrate Wet-Out by Adhesive*:

10.4.1 *Plywood*—Prepare five plywood wet-out test specimens as follows:

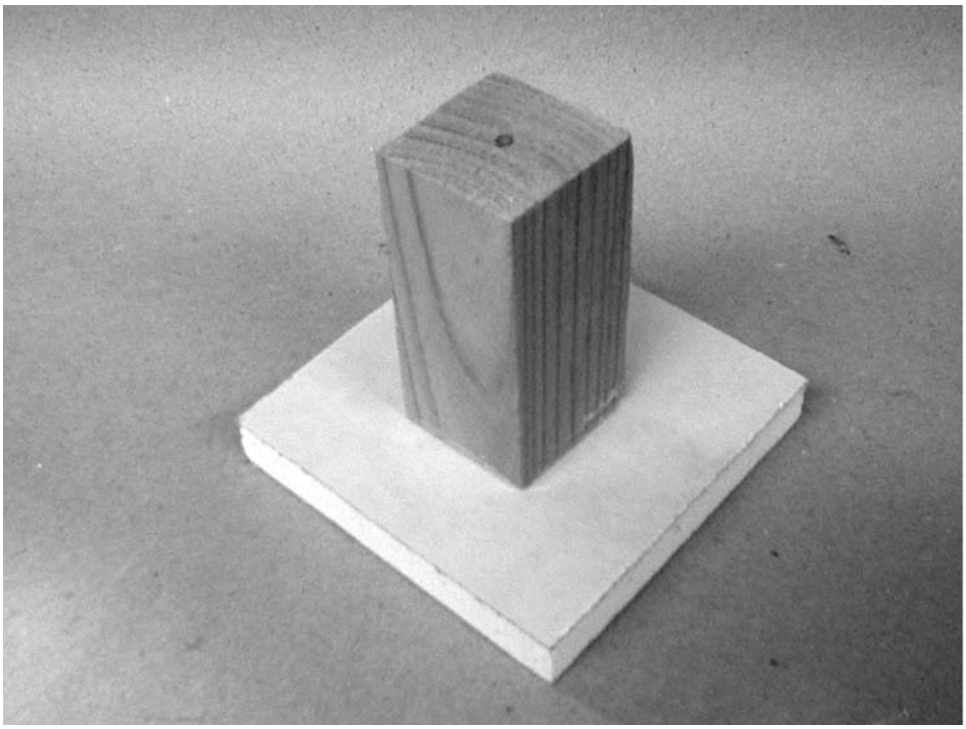

FIG. 4 Tensile Strength Test Specimen

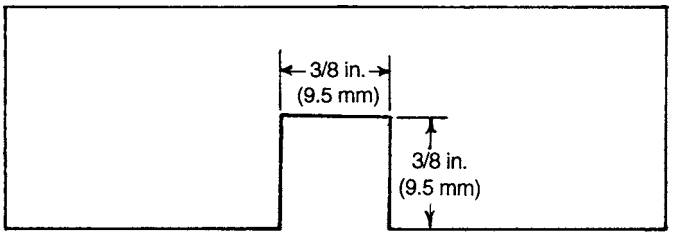

FIG. 5 Description of a Suitable Template for Uniform Bead Application

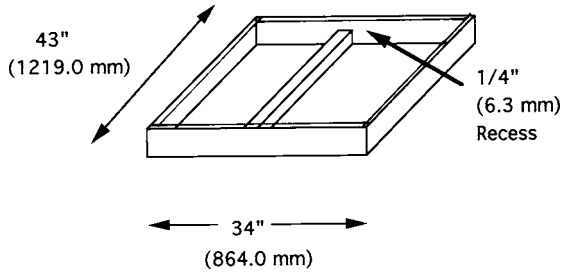

FIG. 6 Gap Filling (Bridging Characteristics) Test Stud Frame

10.4.1.1 Using a spatula, apply and press a small amount of adhesive to the plywood surface that has been conditioned at standard conditions. By reversing the spatula pressure, attempt to lift the adhesive from the surface.

10.4.1.2 Examine the surface of the plywood and the spatula. Determine whether the failure is an adhesion or cohesion type failure. The adhesive is considered to have wetted the plywood if the failure is cohesive.

10.4.2 *Gypsum Wallboard*—Prepare five gypsum wallboard wet-out test specimens as follows:

10.4.2.1 Using a spatula, apply and press a small amount of adhesive on the gypsum wallboard back paper surface that has been conditioned at standard conditions. By reversing the pressure of the spatula, attempt to lift the adhesive from the surface.

10.4.2.2 Examine the surface of the gypsum wallboard and the spatula to determine whether the failure is adhesion or cohesion type failure. The adhesive is considered to have wetted the gypsum wallboard if the failure is cohesive.

10.5 *Gap-Filling (Bridging Characteristics)*:

10.5.1 Construct a test frame 34 by 48 in. (86.4 by 121.9 mm) as shown in Fig. 6 using nominal 2 by 4 Douglas-fir dimension lumber. Install a middle stud at 16 in. on center between the two outer studs, but it is recessed ¼ in. (6.3 mm). By using a level, make sure the frame is perfectly flat. Condition the frame for 48 h at standard conditions.

10.5.2 Using a caulking gun and a suitable template (Fig. 5) spread a uniform ⅜ by ⅜ in. (9.5 by 9.5 mm) bead of adhesive along the length of the center recessed stud. After 15 min, nail or screw fasten, a ½ in. (12.7 mm) thick piece of gypsum wallboard 34 by 48 in. (86.4 by 121.9 cm) to the outside longitudinal studs using 10 in. (25.4 cm) fastener spacing. Firmly press the gypsum wallboard toward the center recessed stud to ensure maximum deflecting and next allow the gypsum wallboard to spring back to its original position. Condition the test frame 48 h under standard conditions.

10.5.3 Remove the fasteners from the outside studs. Grasp one edge of the gypsum wallboard at points adjacent to each side of the recessed stud and pull outwardly at 90° to the stud. Examine the back of the gypsum wallboard and the stud and note the adhesive's gap filling or bridging characteristic. A passing result is when an intact adhesive bond is maintained

between the gypsum wallboard back-side surface paper and recessed wall stud. Report the percent paper failure and contact length in inches.

10.6 *Accelerated Adhesive Aging (Oven Test)*:

10.6.1 Cast a 12 ± 2 mil dry adhesive layer on a 2 by 6 in. (51.0 by 152.0 mm) strip of 1/32 in. (0.8 mm) aluminum panel with a blade. Place the specimen into a 158°F (70°C) oven (humidity uncontrolled) for 500 h.

10.6.2 Allow the specimen to cool for 1 h ± 5 min at room temperature. Then slowly bend the specimen around a 1 in. (25.4 mm) steel mandrel with the adhesive side out. The specimen shall be free of cracks and show no sign of chipping away of the adhesive from the substrate.

10.7 *Freeze-Thaw Stability*:

10.7.1 Place 4 oz (118.0 mL) of adhesive in an 8-oz (236.0-mL) container, close the container tightly and store it at 0 ± 5°F (−17.8 ± 2.8°C) for 24 h and then store it at standard conditions for another 24 h.

10.7.2 After three cycles, test the samples in accordance with 10.1.4.

10.8 *Suitability as a Laminating Adhesive for Vinyl-Covered Wallboard*:

10.8.1 *Vinyl-Covered Gypsum Wallboard Compatibility*:

10.8.1.1 Place 6 oz (177.0 mL) of adhesive into a clean, dry, open, 1 pt (0.5 L) tin-lined can. Place the can into a 1 gal (3.8 L) container. Seal a piece of vinyl-covered wallboard face-up on top of the gallon container using water-impervious duct tape. Place the assembly into an oven at 110°F (43°C) for 24 h.

10.8.1.2 Remove the assembly and the vinyl-covered wallboard and evaluate for blistering, vinyl film discoloration, and bond failure.

10.8.2 *Staining*:

10.8.2.1 In two areas, apply with a caulking gun two dabs of adhesive approximately 2 in. (51.0 mm) in diameter to the face surface of the vinyl-covered wallboard. Following manufacturer's recommendations, clean both areas 1 h after application of the adhesive to the vinyl surface.

10.8.2.2 Evaluate the sample for swelling or discoloration.

11. Report

11.1 Report the following information:

11.1.1 Complete identification of the material tested, including form, type, source, manufacturer's code number, etc.

11.1.2 Complete listing of the results in accordance with Table 1. Reference Fig. 7 for reporting test results.

12. Precision and Bias[3]

12.1 The precision information given below is in the units of measurement (psi), each of which is the average of five test determinations:

	Average	Sr	SrCOV%	SR	SRCOV%	r	R
Shear Strength (psi)	66	16	24	20	30	44	57
Tensile Strength (psi)	56	10	18	14	25	18	40

where:

Sr = Repeatability Standard Deviation
SR = Reproducibility Standard Deviation
r = 95 % Repeatability Limit (within a laboratory)
R = 95 % Reproducibility Limit (between laboratories)
COV = Coefficient of Variation (Average/Standard Deviation) percentage

The table was calculated using the relationship: 95 % Limit = 2.8 × standard deviation.

12.1.1 The term repeatability and reproducibility limits are used as specified in Practice E 177.

13. Keywords

13.1 adhesive; gap-filling; gypsum wallboard; shear strength; tensile strength; vinyl; workability.

[3] Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR: D14–1010.

ADHESIVE: **TEST NO:**
MANUFACTURER: **DATES:**

TESTED BY:

10.1.4 24-Hour Shear	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	10
Status	

10.1.5 14-Day Shear	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	40
Status	

10.1.6 Cyclic Exposure Shear	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	32
Status	

10.2.3 24-Hour Tensile	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	15
Status	

10.2.4 14-Day Tensile	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	25
Status	

10.7 Freeze Thaw Stability	
	Date:
Specimen #	Load (lbf)
1	
2	
3	
4	
5	
Average	
Avg. psi	
Req. psi	10
Status	

Shear Strength under Static Load (10.1.7)
(a) 40 lb load: _____
(b) 20 lb load: _____

Open Time (10.3): _____

Wet out (10.4.1, 10.4.2)
(a) on plywood: _____
(b) on wallboard: _____

Bridging (10.5): _____

Aging (10.6): _____

Freeze Thaw Stability (10.7): _____

Laminating suitability on vinyl-covered wallboard (10.8.1, 10.8.2)
(a) compatibility: _____
(b) staining: _____

FIG. 7 Sample Format for Reporting Test Results

SUMMARY OF CHANGES

Subcommittee D14.70 has identified the location of selected changes to this standard since the last issue (C 557 - 99) that may impact the use of this standard.

(1) Edited Scope section by adding text and also added 1.4.
(2) Edited References section by removing unrelated references and replacing obsolete references.
(3) Edited Terminology section by deleting itemized definitions and replacing obsolete references.
(4) Added line items 4.4 and 4.5 to Significance and Use.
(5) Changed sections 7, 8, 9, and 10 by adding new materials, clarified procedure, revised test fixtures, and deleted rescinded information.
(6) Added tolerances to procedure recommendations for time, weight, and distance.
(7) Removed Packaging and Marking requirements.
(8) Revised the Gap-Filling (Bridging Characteristics) test requirement.
(9) Added Precision and Bias section.
(10) Added photographs to show the revised test fixture apparatus and test specimen construction.
(11) Added Figure 7 – a test results reporting format.