



Designation: **C1047—10a C1047 – 14**

Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base¹

This standard is issued under the fixed designation C1047; 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 U.S. Department of Defense.

1. Scope*

1.1 This specification covers accessories used in conjunction with assemblies of gypsum wallboard and gypsum veneer base to protect edges and corners and to provide architectural features (see Fig. 1).

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

2. Referenced Documents

2.1 ASTM Standards:²

A463/A463M Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process

A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

A879/A879M Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface

B69 Specification for Rolled Zinc

B117 Practice for Operating Salt Spray (Fog) Apparatus

C11 Terminology Relating to Gypsum and Related Building Materials and Systems

C475/C475M Specification for Joint Compound and Joint Tape for Finishing Gypsum Board

C587 Specification for Gypsum Veneer Plaster

D1788 Specification for Rigid Acrylonitrile-Butadiene-Styrene(Abs) Plastics (Withdrawn 1988)³

D3678 Specification for Rigid Poly(Vinyl Chloride) (PVC) Interior-Profile Extrusions

D3935 Specification for Polycarbonate (PC) Unfilled and Reinforced Material

D4549 Classification System and Basis for Specification for Polystyrene and Rubber-Modified Polystyrene Molding and Extrusion Materials (PS)

D5927 Classification System for Thermoplastic Polyester (TPES) Injection and Extrusion Materials Based on ISO Test Methods

D6386 Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting

3. Terminology

3.1 Definitions:

3.1.1 Definitions shall be in accordance with Terminology **C11**.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *accessories*, *n*—cornerbeads, edge trims, and control joints, such as casing beads, bull noses, and stops.

3.2.2 *control joint*, *n*—a formed product used for designed or required separations between adjacent surfaces of gypsum boards or gypsum veneer base.

¹ This specification is under the jurisdiction of ASTM Committee **C11** on Gypsum and Related Building Materials and Systems and is the direct responsibility of Subcommittee **C11.02** on Specifications and Test Methods for Accessories and Related Products.

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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.

³ The last approved version of this historical standard is referenced on www.astm.org.

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

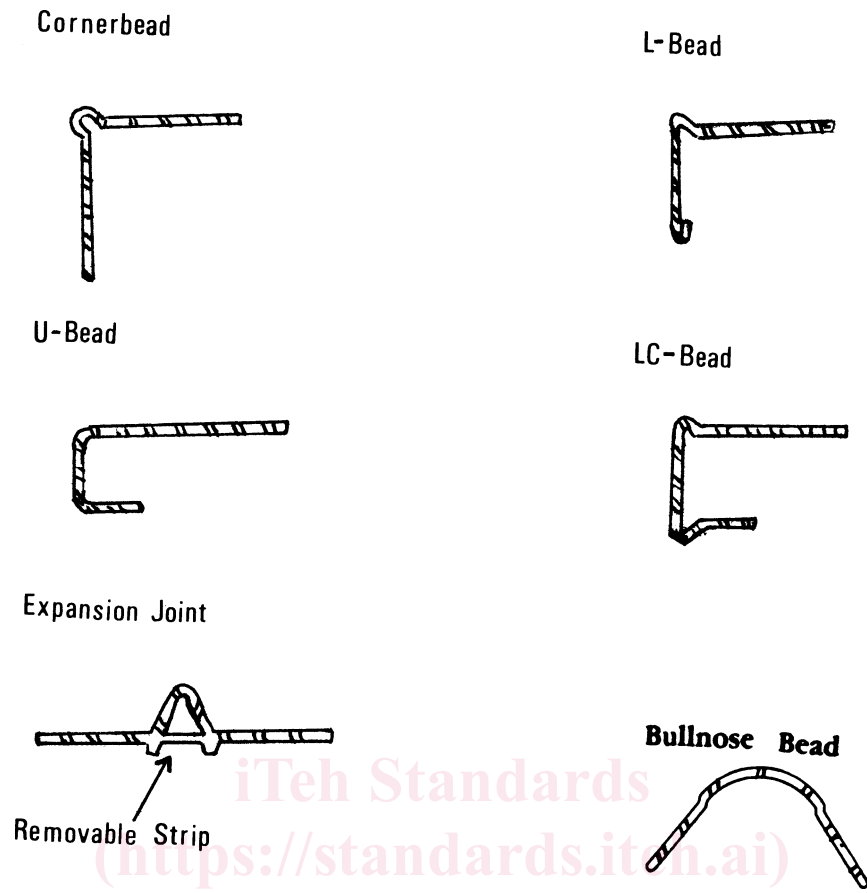


FIG. 1 Accessories for Gypsum Wallboard and Gypsum Veneer Base

3.2.3 *cornerbead, n*—a formed metal, plastic, or metal and paper, or plastic and paper angle for inside and outside corners of gypsum boards or gypsum veneer base.

3.2.4 *edge trim, n*—typically “J”- or “L”-shaped strip, as shown in Fig. 1, formed of metal, plastic, or metal and paper, or plastic and paper to cover exposed ends or edges of gypsum board or gypsum veneer base.

3.2.5 *flange, n*—that portion of the accessory used for the attachment to gypsum wallboard, gypsum veneer base, or a framing member.

3.2.6 *wing, n*—that portion of paper that extends beyond the flange of the metal or plastic cornerbead or accessory used to attach the cornerbead or accessory to gypsum wallboard or gypsum veneer base.

4. Materials and Manufacture

4.1 Steel accessories and steel components of accessories manufactured from steel and paper in combination shall be manufactured from zinc-coated cold-roll (coil or cut length) sheet steel not less than 0.012-in. (0.30-mm) thick before application of coating.

4.1.1 Steel accessories and steel components of accessories manufactured from steel and paper in combination, with total flange width (sum of both flanges) less than 2.0 in. (51 mm), shall be manufactured from zinc-coated cold-roll (coil or cut length) sheet steel not less than 0.012-in. (0.30-mm) thick before application of coating.

4.1.2 Steel accessories and steel components of accessories manufactured from steel and paper in combination, with total flange width (sum of both flanges) greater than 2.0 in. (51 mm), shall be manufactured from zinc-coated cold-roll (coil or cut length) sheet steel not less than 0.009-in. (0.23 mm) thick before application of coating.

4.1.3 Sheet steel, zinc-coated by the hot-dip process, shall be in accordance with Specification A653/A653M, minimized spangle, minimum G-30 coating.

4.1.4 Sheet steel, zinc-coated by the electrolytic process shall be in accordance with Specification A879/A879M; minimum coating on surface side to be 0.000140 in. (0.00356 mm), minimum coating on reverse side to be 0.00010 in. (0.00254 mm).

4.1.5 Sheet steel, aluminum-coated, shall be in accordance with Specification A463/A463M minimum T1-40 coating.

4.1.6 Zinc-phosphate treatment (as specified in 5.4.2 of Practice D6386) or other surface treatments may be used to ensure compatibility and bond as specified in Section 5.

4.2 Zinc accessories shall be manufactured from rolled zinc in accordance with Specification B69, Type I, not less than 0.012-in. (0.305-mm) thick.

4.3 Plastic accessories and plastic components of accessories manufactured from plastic and paper in combination shall be manufactured from rigid PVC, ABS, PETG, high-impact polystyrene (HIPS), or polycarbonate (PC) plastic not less than 0.028 in. (0.711 mm) in thickness, at the thickest point.

4.3.1 PVC, Specification D3678, Class II or III.

4.3.2 ABS, Specification D1788 – 81, all limits 5-3-3-1-1.

4.3.3 PETG, Specification D5927, TPES0310.

4.3.4 HIPS, Specification D4549, PS0221

4.3.5 PC, Specification D3935, PC0110

4.4 Paper components of accessories manufactured from steel and paper in combination shall comply with requirements for thickness, tensile strength, dimensional stability, and bond of joint tape to joint compound as specified in Specification C475/C475M.

5. Physical Properties

5.1 *Compatibility and Bond*—Accessories shall be compatible with and provide a surface bond to the materials specified in Specifications C475/C475M and C587.

5.2 *Test Performance*—Steel accessories and steel components of accessories shall not show any red oxidation when tested as specified in Practice B117 for 192 h.

6. Dimensions and Permissible Variations

6.1 Cornerbeads shall have an interior angle between the flanges no greater than 89°.

6.2 Accessories shall be free of twist or camber of a degree that will prevent their use in the assembly for which they are intended.

6.3 Length tolerances shall be $\pm 3/16$ in. (± 4.8 mm).

6.4 The size of the edge trim shall suit the thickness of the gypsum board used.

6.5 The minimum width of the flange shall be of formed metal or plastic (not paper faced) cornerbeads shall be $7/8 \pm 1/32$ in. (22 \pm 0.8 mm).

6.6 The minimum flange width of paper faced metal or paper faced plastic cornerbead shall be $1/2$ in. (13 mm).

6.7 If paper faced metal or paper faced plastic cornerbead is intended to be attached to wallboard using joint compound or other adhesive alone, and requires the wings for adhesion, then the wings of the cornerbead shall have a minimum width of $1/2$ in. (13 mm).

7. Appearance

7.1 Edges of accessories shall be free of burrs and sharp edges.

8. Configuration

8.1 Flanges of accessories, when required to be attached to framing members, shall have punch outs to accommodate fastening to the framing members. When required to meet performance requirements, the flanges shall be either knurled, made of mesh, deformed, expanded, or otherwise shaped to meet the performance requirements and intended use. Fig. 1 depicts the most commonly used shapes.

NOTE 1—Other types of accessories designed for special finish application (bull-nose, cove, and so forth) shall be manufactured in accordance with the general requirements of this specification.

9. Sampling

9.1 At least 0.25 % of the number of each type of accessory in a shipment, but not less than three pieces, shall be selected to represent the shipment and shall constitute a sample for the purpose of tests by the purchaser or user.

10. Inspection

10.1 Inspection of the accessories shall be agreed upon between the purchaser and the supplier as part of the purchase order.

11. Rejection and Rehearing

11.1 Rejection of accessories that fail to conform to the requirements of this specification shall be reported to the producer or supplier promptly and in writing within 10 working days from receipt of shipment by the purchaser. The notice of rejection shall contain a specific statement of the respect in which the accessories have failed to conform to the requirements of this specification.