Performance Analysis of Drywall Corners

Impact Resistance Testing Program II

Jan 10, 2001

Note: This report was the result of independent testing performed by Structus Building Technologies, Inc.

Executive Summary

A testing program was developed and carried out to determine the impact resistance of installed drywall corners. The objective was to determine the levels at which the NO-COAT® ULTRATRIM™ Corner and traditional metal corner beads withstood impact.

Resistance to Impact

Two test specimens were developed:

1. A six-foot length of galvanized metal corner bead was nailed through ½" drywall to 2"x4" KD wood studs. The corner bead was coated with All-Purpose joint compound in accordance with the manufacturer's recommended installation and allowed to dry over a period of approximately 72 hours.

2. A six-foot length of NO-COAT® ULTRATRIM™ Corner was applied to ½" drywall fastened to 2"x4" KD wood studs. The ULTRATRIM™ corner was coated with All-Purpose joint compound in accordance with manufacturer's recommended installation and was allowed to dry over a period of approximately 72 hours.

Test Criteria

A 5 pound steel weight was dropped from various heights directly on to the apex of each of the above specimens to determine the resistance of each installed corner to increasing levels of impact.

Impact Test Results

The chart below indicates the level of failures recorded:

DROP HEIGHT (5 LB) WEIGHT	NAIL-ON METAL	ULTRATRIM™
6"	No visible damage	No visible damage
12"	Edge cracking visible; approximately 3" in length on one side	No visible damage
18"	Edge cracking visible on both sides of corner approximately 3" both sides	No visible damage
24"	Slight dent to apex of bead, edge cracking evident on both sides	No visible damage
30"	Dent to apex of bead, edge visibly lifted on one side	Slight dent to apex of corner
36"	Dent to apex of bead, edges lifted on both sides	Apex of corner split down center approximately 4 inches

Conclusions

The NO-COAT® ULTRATRIM™ withstood substantially greater impact as determined by testing parameters than the galvanized metal corner bead.