



CERAMIC TILE INSTITUTE OF AMERICA, INC.

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CTIOA Field Report 88-9-1 (R-98)

SUBJECT: V-CAP TILE TRIM

INTRODUCTION

In recent years, some tile manufacturers have designed their V-Cap trim pieces thinner and therefore they become easier to break.

While it is understood that many installation methods contribute to V-Cap cracking, which we will address briefly, this report will also discuss methods for testing V-Cap trim with regards to breaking strength with load applied perpendicular to its axis

There are various types of cracks found at inspection sites.

1. Horizontal on the apron portion of the trim.
2. Horizontal at the top of the crown.
3. Horizontal at the bottom of the crown on the flat portion adjacent to the field tile.

The cracks are usually caused from an expansion force similar to those from large areas of wood substrates, combined with mortar shrinkage.

The most common crack is the horizontal at the bottom of the crown on the flat portion adjacent to the field tile.

This is not surprising, given:

1. This is the area where the mud pulls away during shrinkage from the top of the metal V-Cap channel creating a weakened plane.
2. The apron portion of the V-Cap is pulled and pushed perpendicular to this

weakened plane during expansion contraction cycling of the wood base.

It follows that the stronger the V-Cap, the less chance of cracking at these locations. It is therefore suggested that V-Cap trim be able to withstand 100 load pounds expansion and 170 load pounds compression when tested in accordance with CTIOA-98-T10.