



**BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908**

**NOTICE OF ACCEPTANCE (NOA)**

---

**ITW Ramset/Red Head.  
1300 N. Michael Drive  
Wood Dale, IL 60191**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone.

**DESCRIPTION: New G5 Adhesive Anchoring System.**

**APPROVAL DOCUMENT:** Drawing No. 04-288, Sheets 1 of 1, titled "New G5 Adhesive Anchoring System" dated 03/31/04 with last revision on 12/22/04, prepared by Thornton Tomasetti Group, signed and sealed by V. J. Knezevich PE, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance (NOA) number and approval date by the Miami-Dade County Product Control Division.

**MISSILE IMPACT RATING: None**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence page as well as approval document mentioned above.

The submitted documentation was reviewed by **Candido F. Font, P.E.**

  
02/17/05



**NOA No 04-0405.01  
Expiration Date: February 17, 2010  
Approval Date: February 17, 2005  
Page 1**

**ITW Ramset/Red Head.**

**NOTICE OF ACCEPTANCE: EVIDENCE PAGE**

**A DRAWINGS:**

1. Drawings prepared by Thornton Tomasetti Group, titled "New G5 Adhesive Anchoring System", Drawing No. 04-288, dated 03/31/04 with last revision on 12/22/04, sheet 1 of 1, signed and sealed by V.J. Knezevich PE.

**B TEST:**

	Laboratory No.	Test Report.	Date.	Signature
1.	ARL 30484	ICBO AC58	09/24/03	C. A. Hamon PE.
2.	ARL 30485	ICBO AC58	09/26/04	C. A. Hamon PE
3.	ARL 30486	ICBO AC58	10/09/03	C. A. Hamon PE
4.	CEL 2I104T	ICBO AC58	10/31/02	L. W. Mattis PE
5.	CEL 2I98Cr	ICBO AC58	06/07/02	L. W. Mattis PE

**C CALCULATIONS:**

N/A

**D QUALITY ASSURANCE.**

1. Miami-Dade Quality Control Division.

**E MATERIAL CERTIFICATIONS:**

N/A

**F STATEMENTS:**

1. Code compliance letter issued by Thornton Tomasetti Group on 01/17/05 signed and sealed by V. J. Knezevich PE.
2. No financial interest letter issued by Thornton Tomasetti Group on 01/17/05, signed by V.J. Knezevich PE and notarized by J. B. White



Candido F. Font, P.E.

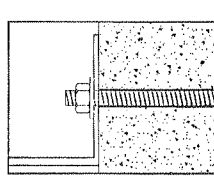
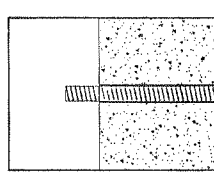
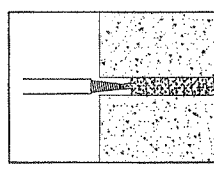
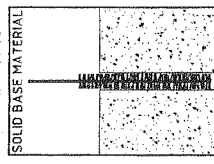
Senior Product Control Examiner

NOA No 04-0405.01

Expiration Date: February 17, 2010

Approval Date: February 17, 2005

**FIGURE 1**  
INSTALLATION STEPS



1. DRILL PROPER SIZED HOLE. CLEAN OUT HOLE FROM BOTTOM WITH COMPRESSED AIR. COMPLETE HOLE PREPARATION WITH USE OF A BRUSH AND REPEAT CLEANING WITH FORCED AIR (LEAVE NO DUST OR SLURRY).
2. WHEN STARTING NEW CARTRIDGE OR NOZZLE, DISPENSE AND DISCARD BY HAND INTO THE BOTTOM OF THE HOLE WITH A SLOW TWISTING MOTION. THIS INSURES THE ADHESIVE FILLS Voids AND DEVICES UNIFORMLY.
3. INSERT THE SELECTED ROD OR REBAR SLOWLY AFTER THE RECOMMENDED CURE TIME IS MET. INSTALL AND TIGHTEN FIXTURE INTO PLACE.

**GENERAL NOTES:**

1. THIS APPROVAL DOCUMENT REPRESENTS AN ADHESIVE ANCHORING SYSTEM FOR THE (ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE RESISTANT (HVHZ) OF THE FLORIDA BUILDING CODE 2001 WITH 2003 REVISIONS.
2. REFERENCE APPLIED RESEARCH LABORATORIES (A.R.L.) TEST REPORTS NO. 30484, 30485 & 30486.
3. NEW G5 ADHESIVE ANCHORING SYSTEM IS A TWO COMPONENT STRUCTURAL EPOXY ADHESIVE FOR SUBSTRATE TYPE THREADED REBAR. THE EPOXY ADHESIVE IS A NORMAL WEIGHT CONCRETE. THE COMPONENTS ARE AN EPOXY RESIN AND AN AMINE-BASED HARDENER WHICH SHALL BE MIXED TO A 1:1 RATIO BY VOLUME. THE ADHESIVE IS IDENTIFIED AS NEW G5.
4. THIS ADHESIVE ANCHORING SYSTEM SHALL BE INSTALLED PER FIGURE 1.
5. THE STUD-TYPE THREADED RODS MAY RANGE FROM 5/8" THROUGH 1" IN DIAMETER, AND SHALL COMPLY WITH EITHER ASTM A193, GRADE B7 OR ASTM A192, 600 P.S.I. MINIMUM OR ASTM F593, GRADE F593A (ALLOY TYPE 304) (P<sub>u</sub> = 115,000 P.S.I., MIN).
6. DEFORMED REINFORCEMENT BARS MAY RANGE FROM NO. 4 TO NO. 8 SHALL HAVE A MINIMUM SPECIFIED YIELD STRENGTH OF 60 K.S.I. AND SHALL COMPLY WITH ASTM A 615, GRADE 60.
7. NORMAL WEIGHT CONCRETE SHALL HAVE A MINIMUM 4,000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS. CONCRETE MATERIALS SHALL COMPLY WITH THE TEST METHODS OF THE CONCRETE INTERNATIONAL CONCRETE PRACTICE, AC308.
8. ALLOWABLE SHEAR AND TENSION LOADS ARE BASED ON THE ALLOWABLE SHEAR & TENSION LOADS.
9. TABLES 2 AND 3 ALLOWABLE LOADS ARE TO BE REDUCED TO PER FIGURE 2 WHEN INSTALLED AT LOCATIONS WHERE THE BASE MATERIAL TEMPERATURE MAY EXCEED 120° F.
10. CRITICAL ANCHOR SPACING DISTANCES SPECIFIED IN TABLES 1 & 2 SHALL BE EQUAL TO THE EMBEDMENT DEPTH FOR 100% TENSION LOAD AND EQUAL TO 0.75 TIMES THE EMBEDMENT DEPTH FOR 75% TENSION LOAD.
11. CRITICAL EDGE DISTANCES SPECIFIED IN TABLES 1 & 2 SHALL BE EQUAL TO THE EMBEDMENT DEPTH FOR 100% TENSION LOAD AND 70% TENSION LOAD AND 30% SHEAR LOAD.
12. INFORMATION FOR SITE-SPECIFIC APPLICATIONS.
13. USE OF THIS APPROVAL DOCUMENT SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
14. ANY MODIFICATIONS OR ADDITIONS TO THIS APPROVAL DOCUMENT WILL VOID THE APPROVAL DOCUMENT.

**REBAR ANCHORS INSTALLED IN MIN. 4,000 P.S.I. CONCRETE**

TABLE	REBAR SIZE	HOLE DIAMETER (INCHES)	MINIMUM EMBEDMENT DEPTH (INCHES)	CRITICAL ANCHOR SPACING (INCHES)	CRITICAL EDGE DIST. (INCHES)	ALLOWABLE LOAD* (POUNDS)
1	#4	5/8	4-1/2	6-3/4	5-5/8	3,618
	#5	3/4	5-5/8	8-7/16	7-1/16	5,318
	#6	7/8	6-3/4	10-1/8	8-7/16	6,919
	#8	1-1/4	9	13-1/2	11-1/4	13,919

\* ALLOWABLE LOAD VALUES SHALL BE REDUCED PER FIGURE 2 FOR INSTALLATIONS WHERE BASE MATERIAL TEMPERATURE IS HIGHER THAN 120° F.

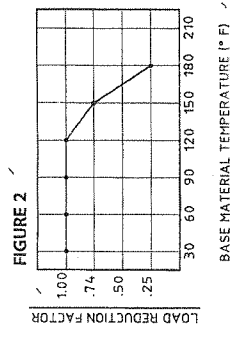
**THREADED ROD ANCHORS INSTALLED IN MIN. 4,000 P.S.I. CONCRETE**

TABLE	ANCHOR DIAMETER (INCHES)	HOLE DIAMETER (INCHES)	MINIMUM EMBEDMENT DEPTH (INCHES)	CRITICAL ANCHOR SPACING (INCHES)	CRITICAL EDGE DIST. (INCHES)	SETTING TORQUE (FT-LBS)	ALLOWABLE LOAD* (POUNDS)	
							TENSION	SHEAR
2	5/8	3/4	5-5/8	8-7/16	7-1/16	55-80	5,220	4,387
	3/4	7/8	6-3/4	10-1/8	8-7/16	106-160	7,255	6,230
	1	1-1/8	9	13-1/2	11-1/4	276-330	13,383	10,912

\* ALLOWABLE LOAD VALUES SHALL BE REDUCED PER FIGURE 2 FOR INSTALLATIONS WHERE BASE MATERIAL TEMPERATURE IS HIGHER THAN 120° F.

**THREADED ROD ANCHORS INSTALLED IN MIN. 4,000 P.S.I. CONCRETE**

TABLE	ANCHOR DIAMETER (INCHES)	HOLE DIAMETER (INCHES)	MINIMUM EMBEDMENT DEPTH (INCHES)	EDGE DISTANCE (INCHES)	TENSION	ALLOWABLE LOAD (pounds)	
						SHEAR PARALLEL TO THE EDGE	SHEAR PERPENDICULAR TO THE EDGE
3	5/8	3/4	5-5/8	1-3/4	2,610	2,711	1,031
	3/4	7/8	6-3/4	1-3/4	3,628	3,354	1,158



**FIGURE 2**

**CURE TIME CHART**

TABLE	MINIMUM CONCRETE TEMPERATURE (°F)	MINIMUM WORKING TIME (MINUTES) <sup>2</sup>	MINIMUM CURE TIME (HOURS) <sup>3</sup>
4	60	18	3
	70	15	2
	≥ 90	8.5	2

1. ADHESIVES SHALL BE INSTALLED IN SUBSTRATES AT TEMPERATURES BETWEEN 60°F AND 125°F AT TIME OF INSTALLATION AND CURING OF THE EPOXY ADHESIVE.
2. ANCHORS ARE TO BE UNDISTURBED DURING THE WORKING TIME.
3. CURE TIME REQUIRED PRIOR TO APPLICATION OF ALLOWABLE (DESIGN) TENSILE AND SHEAR LOADS.

Approved as engineering with the Florida Building Code  
 Date: 02/11/05  
 NAME: [Signature]  
 (Miami-Dade County Engineer)