



**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)

**Powers Fasteners, Inc.
2 Power Square.
New Rochelle, N.Y. 10801**

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: Concrete Anchors

APPROVAL DOCUMENT: Drawing No. MDC-03, Sheets 1 through 2 of 2, titled "Power-Fast Epoxy and Chem-Stud Anchor" dated 07/14/03 with last revision on 12/01/03, prepared by Power Fasteners, Inc., signed and sealed by L. W. Mattis 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 E. Font, P.E.**

[Handwritten signature]
01/08/04



**NOA No 03-0311.07
Expiration Date: January 8, 2009
Approval Date: January 8, 2004
Page 1**

Power Fasteners, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE PAGE

A DRAWINGS:

1. Drawings prepared by Powers Fasteners Inc, titled "Power-Fast Epoxy and Chem-Stud Anchor"; Drawing No. MDC-03, dated 07/14/03 with last revision on 12/01/03, sheet 1 through 2 of 2, signed and sealed by L. W. Mattis PE.

B TEST:

	Laboratory No.	Test Report.	Date.	Signature
1.	CTI 7R52C	ASTM E1512	12/31/97	L.W. Mattis PE
2.	CEL 7R52C (95)	ASTM E1512	01/25/99	L.W. Mattis PE.
3.	CEL 8R54C	ASTM E1512	01/25/99	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. No change letter issued by Power Fasteners Inc on 07/20/03, signed by M. Gaffigan and notarized by L. Bailey.
2. No interest letter issued by Powers Fasteners on 07/20/03, signed by M. Gaffigan and notarized by L. Bailey.
3. Code compliance letter issued by CEL Consulting on 12/03/03 and signed by L. Mattis PE.


Candido F. Font, P.E.
Senior Product Control Examiner
NOA No 03-0311.07
Expiration Date: January 8, 2009
Approval Date: January 8, 2004

POWER-FAST EPOXY

DESCRIPTION AND MATERIALS:

Power-Fast Epoxy is a two-component structural epoxy used for installing threaded rod, smooth dowels, or reinforcing bar into concrete. The epoxy is a 100% solids, odorless, solvent-free, non-shrink, non-sag, premium, high strength epoxy packed in a dual-component plastic cartridge system.

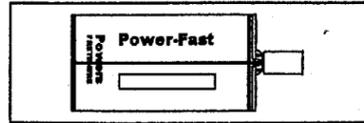


TABLE No. 1

ALLOWABLE TENSION LOADS FOR THREADED ROD INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE

Anchor Diameter (inches)	Bit Diameter (inches)	Embedment Depth (inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c		Allowable Steel Strength (lbs) Provided for reference Anchors Tested Using A 193, Grade B7 Threaded Rods.
			2500 psi	5000 psi	
3/8	7/16	1-1/2	925	1,045	4,540
		3-3/8	2,670	3,130	
		5-1/4	3,915	3,795	
1/2	9/16	2	1,340	3,615	8,085
		4-1/2	3,630	5,440	
		7	5,840	7,125	
5/8	3/4	2-1/2	1,930	2,625	12,660
		5-5/8	5,410	6,145	
		8-3/4	8,620	9,570	
3/4	7/8	3	2,635	3,515	19,230
		6-3/4	7,870	10,385	
		10-1/2	11,210	11,970	
7/8	1	3-1/2	3,050	4,455	24,790
		7-7/8	9,140	11,475	
		12-1/4	14,645	18,250	
1	1-1/8	4	3,785	5,305	32,380
		9	11,185	16,230	
		14	16,470	20,105	
1-1/4	1-3/8	5	4,690	9,695	50,610
		11-1/4	14,615	25,225	
		17-1/2	22,240	34,310	

TABLE No. 2

ALLOWABLE SHEAR LOADS FOR THREADED ROD INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE

Anchor Diameter (inches)	Bit Diameter (inches)	Minimum Embedment Depth (inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c	Allowable Steel Strength (lbs) Provided for reference Anchors Tested Using A 193, Grade B7 Threaded Rods.
			2500 psi	
3/8	7/16	1-1/2	1,145	2,340
		3-3/8	1,535	
3/4	7/8	3	3,610	9,390
		6-3/4	6,355	

- The tabulated shear and tension values are for anchors installed in normal weight concrete having reached the designated ultimate compressive strength at the time of installation.
- Spacing and edge distance shall be in accordance with Table No. 3.
- Allowable loads must be the lesser of allowable bond or allowable steel strength as shown in the table.
- The allowable loads may be increased by 33-1/3% for short-term loading due to earthquakes or wind.
- For combined tension and shear loading, use the straight line interaction formula.
- Installation shall be performed in accordance with manufacturer's published installation instructions.
- Allowable bond strength tension values in Table 1 are for the Standard Set formulation. Reduce allowable tension values by 25% for the Fast Set formulation.

TABLE No. 3

THREADED ROD - ALLOWABLE SPACING AND EDGE DISTANCE

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	16D	8D	0.70
EDGE DISTANCE - TENSION	10D	4D	0.56
EDGE DISTANCE - SHEAR	12D	4D	0.21

TABLE No. 4

REINFORCING STEEL - ALLOWABLE SPACING AND EDGE DISTANCE

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	16D	8D	0.50
EDGE DISTANCE - TENSION	12D	4D	0.56
EDGE DISTANCE - SHEAR	16D	4D	0.17

- The listed values are the minimum distances and spacing between anchors required to obtain the load values listed in Table No. 1, 2, 6 & 7. D = Anchor Diameter. When adjacent anchors are different sizes or embedments, use largest value of D.
- The listed values are the minimum distances at which the anchor can be set, when load values are adjusted appropriately.
- Load values in the tables are multiplied by the reduction factor when anchors are installed at the minimum spacing listed. Use linear interpolation for spacing between critical and minimum distances. Multiple reduction factors for more than one spacing or edge distance shall be calculated separately and multiplied.

TABLE No. 5

MANUFACTURER'S RECOMMENDED CURE TIME FOR POWER-FAST EPOXY ADHESIVE

BASE MATERIAL TEMP. (F°)	MAXIMUM GEL TIME (minutes)		MINIMUM CURING TIME (hours)		FULL CURING TIME (hours)	
	FAST SET	SLOW SET	FAST SET	SLOW SET	FAST SET	SLOW SET
	40	30	60	8	16	36
60	20	45	3	7	24	36
75	15	35	2	6	24	24
90	10	20	1-1/2	4	16	24

CHART No. 1

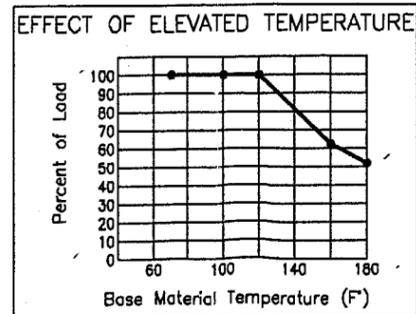


TABLE No. 6

ALLOWABLE TENSION LOADS FOR REINFORCING STEEL PER ASTM A615 INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE.

REINFORCING SIZE	BIT DIAMETER (Inches)	MINIMUM EMBEDMENT (Inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c 2500 psi	ALLOWABLE STEEL STRENGTH (lbs) Provided for reference	
				GRADE 40	GRADE 60
#3	1/2	3-3/8	2,495	2,200	2,640
#4	5/8	4-1/2	3,610	4,000	4,800
#5	3/4	5-5/8	5,025	6,200	7,440
#6	7/8	6-3/4	6,575	8,800	10,560
#7	1-1/8	7-7/8	8,325	12,000	14,400
#8	1-1/4	9	12,080	15,800	18,960
#9	1-1/8	10-1/8	13,925	20,000	24,000
#10	1-1/2	11-1/4	18,515	25,400	30,480

TABLE No. 7

ALLOWABLE SHEAR LOADS FOR REINFORCING STEEL PER ASTM A615 INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE.

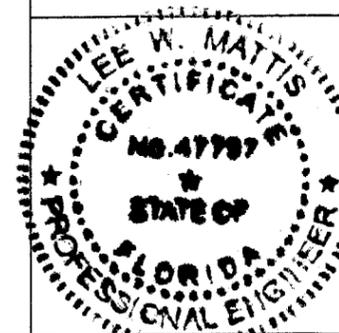
REINFORCING SIZE	BIT DIAMETER (Inches)	MINIMUM EMBEDMENT (Inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c 2500 psi	ALLOWABLE STEEL STRENGTH (lbs) Provided for reference	
				GRADE 40	GRADE 60
#3	1/2	3-3/8	2,085	1,310	1,680
#6	7/8	6-3/4	8,675	5,240	6,730

- The tabulated shear and tension values are for anchors installed in normal weight concrete having reached the designated ultimate compressive strength at the time of installation.
- Spacing and edge distance shall be in accordance with Table No. 4.
- Allowable loads must be the lesser of allowable bond or allowable steel strength as shown in the table.
- The allowable loads may be increased by 33-1/3% for short-term loading due to earthquakes or wind.
- For combined tension and shear loading, use the straight line interaction formula.
- Installation shall be performed in accordance with manufacturer's published installation instructions.
- Allowable bond strength tension values in Table 6 are for the Standard Set formulation. Reduce allowable tension values by 25% for the Fast Set formulation.

Approved as complying with the Florida Statute Code
 Date: 01/08/04
 NCAR 03-0311.07
 Miami Dade Product Control
 Division
 By: [Signature]

Table & note revisions for approval	12/1/03
Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

MIAMI DADE COUNTY - PRODUCT APPROVAL



TITLE	POWER-FAST EPOXY		
	2 Powers Square Powers Fasteners, Inc. New Rochelle, N.Y. 10801		
DATE OF ISSUE:	SHEET No.	DRAWING No.	
6/3/03	1 OF 2	MDC-03	

Lee W. Mattis 12/1/03

DESCRIPTION AND MATERIALS:

The Chem-Stud Anchor System consists of a two-part resin capsule that is used to bond chisel-pointed threaded rods in predrilled holes in normal-weight, stone-aggregate concrete.

The Chem-Stud capsule contains premeasured amounts of resin and hardener in two sealed glass tubes. The outer glass tube is filled with vinyl ester resin and quartz aggregate. A smaller sealed glass tube is suspended in the resin and is filled with a hardening catalyst. The adhesive components are mixed by spinning a chisel-pointed anchor rod into the capsule, using a rotary hammer. A specific capsule size is provided for each anchor diameter of anchor rod.

CHEM-STUD ANCHOR

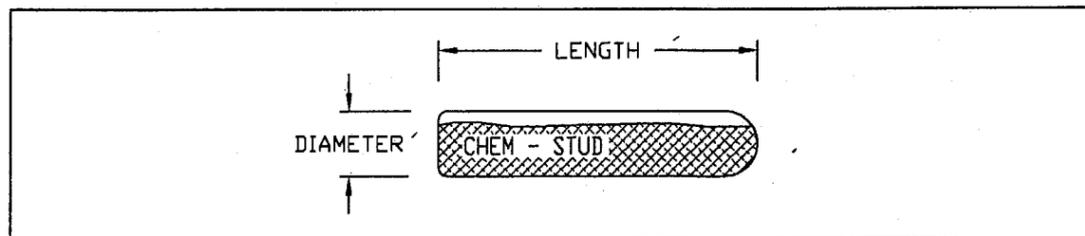


TABLE No. 1

ALLOWABLE TENSION LOADS FOR THREADED ROD INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE

Anchor Diameter (inches)	Bit Diameter (inches)	Embedment Depth (inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c		Allowable Steel Strength (lbs) Provided for reference Anchors Tested Using A 193, Grade B7 Threaded Rods.
			2500 psi	5500 psi	
3/8	7/16	3-1/2	1,730	2,720	4,540
1/2	9/16	4-1/4	2,935	4,595	8,085
5/8	11/16	5	4,055	6,290	12,660
3/4	7/8	6-5/8	6,525	9,255	18,230
7/8	1	7	6,875	11,195	24,790
1	1-1/8	8-1/4	9,475	16,504	32,380
1-1/4	1-1/2	10-1/4	15,965	22,105	50,610

- The tabulated tension values are for anchors installed in normal weight concrete having reached the designated ultimate compressive strength at the time of installation. Linear interpolation may be used for concrete strengths between those listed.
- Spacing and edge distance shall be in accordance with Table No. 2.
- Allowable loads must be the lesser of allowable bond or allowable steel strength as shown in the table.
- The allowable loads may be increased by 33-1/3% for short-term loading due to earthquakes or wind.
- For combined tension and shear loading, use the straight line interaction formula.
- Installation shall be performed in accordance with manufacturer's published installation instructions.

TABLE No. 2

THREADED ROD - ALLOWABLE SPACING AND EDGE DISTANCE

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	16D	8D	0.64
EDGE DISTANCE - TENSION	10D	4D	0.64
EDGE DISTANCE - SHEAR	12D	4D	0.22

- The listed values are the minimum distances required to obtain the load values listed in Table No. 1. D = Anchor Diameter. When adjacent anchors are different sizes or embedments, use largest value of D.
- The listed values are the minimum distances at which the anchor can be set, when load values are adjusted appropriately.
- Load values in the table are multiplied by the reduction factor when anchors are installed at the minimum distances listed. Use linear interpolation for spacing between critical and minimum distances. Multiple reduction factors for more than one spacing or edge distance shall be calculated separately and multiplied.

TABLE No. 3

ALLOWABLE SHEAR LOADS FOR THREADED ROD INSTALLED IN MINIMUM 2500 PSI NORMAL WEIGHT CONCRETE

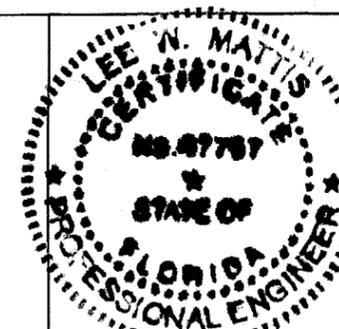
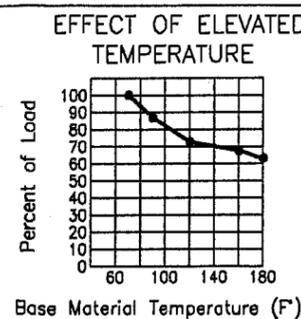
Anchor Diameter (inches)	Bit Diameter (inches)	Embedment Depth (inches)	Allowable Bond Strength (lbs) Concrete Strength, f'c	Allowable Steel Strength (lbs) Provided for reference
			2500 psi	Anchors Tested Using A 193, Grade B7 Threaded Rods.
3/8	7/16	3-1/2	1,665	2,340
3/4	7/8	6-5/8	7,515	9,390

- The tabulated shear values are for anchors installed in normal weight concrete having reached the designated ultimate compressive strength at the time of installation. Linear interpolation may be used for concrete strengths between those listed.
- Spacing and edge distance shall be in accordance with Table No. 2.
- Allowable loads must be the lesser of allowable bond or allowable steel strength as shown in the table.
- The allowable loads may be increased by 33-1/3% for short-term loading due to earthquakes or wind.
- For combined tension and shear loading, use the straight line interaction formula.
- Installation shall be performed in accordance with manufacturer's published installation instructions.

Approved as complying with the Florida Building Code
 Date: 01/08/04
 NOAH 03-031107
 Miami Dade Product Control Division
 by: [Signature]

Table revisions for approval	12/1/03
Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

CHART No. 1



MIAMI DADE COUNTY - PRODUCT APPROVAL

TITLE CHEM-STUD ANCHOR		
Powers Fasteners, Inc. 2 Powers Square New Rochelle, N.Y. 10801		
DATE OF ISSUE: 7/14/03	SHEET No. 2 OF 2	DRAWING No. MDC-03

Lee W. Mattis 12/1/03