

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION NOTICE OF ACCEPTANCE (NOA)

ITW Buildex, a division of Illinois Tool Works, Inc. 155 Harlem Ave. Glenview, IL 60025

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section 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: ITW Buildex Tapcon® Concrete & Masonry Anchor

APPROVAL DOCUMENT: Drawing No.**23-61621**, titled "ITW Buildex Tapcon Concrete & Masonry Anchor", sheets 1 and 2 of 2, dated 02/24/23, with revision dated 12/12/23, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance (NOA) number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: None

LABELING: Each box shall bear a permanent label with the manufacturer's name or logo, Roselle, IL or Addison, IL 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 revises NOA No. 22-0524.03 and consists of this page 1 and evidence page E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by Manuel Perez, P.E.



NOA No. 24-0102.05 Expiration Date: May 13, 2026 Approval Date: February 15, 2024 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

- 1. Manufacturer's die drawings and sections. (Submitted under NOA No. 03-0722.05)
- 2. Drawing No. 20-31376, titled "Tapcon Masonry Fasteners", sheet 1 of 1, dated 10/20/20, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

(Submitted under NOA No. 21-0201.05)

B. TESTS

Test report on Corrosion Resistance (Salt Spray) per ASTM G 85-11, Annex A5, 140 cycles (280 hours) as detailed in TAS 114, Appendix E of: 3/16" x 2-3/4" & 1/4" x 2-3/4" Blue Tapcon, and 3/16" x 1-3/4" & 1/4" x 2-3/4" White Tapcon Flat Head Anchors, prepared by PRI Construction Materials Technologies, LLC, Test Report No. PRI-2415T0001, dated 10/14/21 thru 11/10/21 and signed and sealed by Duc Thanh Nguyen, P.E.

(Submitted under NOA No. 22-0524.03)

2. Recertification Test report on static tension and shear capacity of ¹/₄" dia. SS Tapcon and 5/16" dia. Tapcon XL in concrete and CMU per ASTM E 488, prepared by Wiss, Janney, Elstner Associates, Inc., dated 04/17/19 and 04/23/19.

	Laboratory	<u>Test Report</u>	<u>Date</u>	<u>Signature</u>	
3.	HETI 00-4160	ASTM E488	10/25/00	H. M. Medina, P.E.	
4.	HETI 00-4092	ASTM E488	02/25/00	H. M. Medina, P.E.	
5.	HETI 00-4153	ASTM E488	10/25/00	H. M. Medina, P.E	
6.	HETI 00-4072	ASTM E 488	02/25/00	H. M. Medina, P.E.	
7.	HETI 01-5029	ASTM E.488	05/07/01	H. M. Medina, P.E.	
8.	HETI 01-5027	ASTM E 488	05/07/01	H. M. Medina, P.E	
9.	PRI 01078	Protocol PA 114	08/27/01	C. L. Thomas, P.E	
10.	PRI 01079	Protocol PA 114	08/27/01	C. L. Thomas, P.E	
11.	ARL 30291	ASTM E488	01/22/02	C. A. Hamon, P.E	
12.	ARL 30292	ASTM E488	01/29/02	C. A. Hamon, P.E	
13.	ARL 30299	ASTM E488	01/30/02	C. A. Hamon, P.E	
14.	ARL 30294	ASTM E488	01/30/02	C. A. Hamon, P.E.	
15.	HETI 01-C109	ASTM C39	01/16/01	H. M. Medina, P.E	
16.	MTS 25-7654-PS	Protocol PA 114	06/03/96	H. M. Medina, P.E	
	(Submitted under NOA No. 03-0722.05)				

- C. CALCULATIONS
 - 1. None.

Manuel Perez, P.E.

Manuel Perez, P.E. Product Control Examiner NOA No. 24-0102.05 Expiration Date: May 13, 2026 Approval Date: February 15, 2024

ITW Buildex, a division of Illinois Tool Works, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's (CONTINUED)

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

- 1. Name change request to legal enterprise name of Illinois Tool Works, Inc. of which Buildex was and is a wholly owned brand and division of Illinois Tool Works, Inc., dated January 20, 2023 signed by Henry Schniedermeier, Engineering Manager, ITW Construction – Residential & Renovation (Submitted under NOA No. 22-0524.03)
- 2. Affidavit affirming that Illinois Tool Works, Inc. (the Company) is a Delaware corporation, having its shares traded at the New York Stock Exchange (NYSE) and that the assets and business operations known as ITW Buildex are owned directly by the Company and are referred to as: ITW Buildex, a division of Illinois Tool Works, Inc., dated January 25, 2023, signed by Phillip McGovern, Assistant Secretary, Illinois Tool Works, Inc. *(Submitted under NOA No. 22-0524.03)*
- 3. Affidavit from ITW Commercial Construction North America stating that corrosion coatings tested are equivalent to the corrosion coatings listed in above NOA's, dated May 3, 2022, signed by Christopher Horst, Project Engineer, ITW Construction Residential & Renovations, on behalf of ITW Commercial Construction North America. *(Submitted under NOA No. 22-0524.03)*
- Statement letter of conformance, complying with FBC 7^h Edition (2020) dated 01/07/21, issued by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

(Submitted under NOA No. 21-0201.05)

5. No change letter issued by ITW Buildex, dated 11/08/07, signed by Michael Gong, Ph.D.

(Submitted under NOA No. 07-1126.10)

6. No change letter issued by ITW Buildex, on 11/07/03 and signed by D. Kenny. *(Submitted under NOA No. 03-0722.05)*

G. OTHERS

1. Notice of Acceptance No. **21-0201.05**, issued to ITW Buildex for their Tapcon Masonry Fasteners, approved on 05/13/21 and expiring on 05/13/26.

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Manuel Perez, P.E. Product Control Examiner NOA No. 24-0102.05 Expiration Date: May 13, 2026 Approval Date: February 15, 2024

ITW Buildex, a division of Illinois Tool Works, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. 23-61621, titled "ITW Buildex Tapcon Concrete & Masonry Anchor", sheets 1 and 2 of 2, dated 02/24/23, with revision dated 12/12/23, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS

- 1. None.
- C. CALCULATIONS
 - 1. None.

D. QUALITY ASSURANCE

- 1. Miami-Dade Department of Regulatory and Economic Resources (RER)
- E. MATERIAL CERTIFICATIONS
 - 1. None.

F. STATEMENTS

- Statement letter of conformance, complying with FBC 7th Edition (2020) and FBC 8th Edition (2023) dated 12/20/23, issued by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.
- 2. Statement letter of no financial interest dated 12/20/23, issued by Engineering Express, signed and sealed by Frank L. Bennardo, P.E..

G. OTHERS

1. Notice of Acceptance No. **22-0524.03**, issued to ITW Buildex, a division of Illinois Tool Works, Inc. for their Tapcon Masonry Fasteners, approved on 05/11/21 and expiring on 05/13/26.

Nanu

Manuel Perez, P.E. Product Control Examiner NOA No. 24-0102.05 Expiration Date: May 13, 2026 Approval Date: February 15, 2024

TW **Buildex** TAPCON[®]

CONCRETE & MASONRY ANCHOR

VALID FOR USE INSIDE AND OUTSIDE THE HVHZ (SEE LIMITATIONS HEREIN)

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) (HIGH VELOCITY HURRICANE ZONE) AND THE FOLLOWING STANDARDS: ASTM E488, ASTM G85, & TAS 114. 1.
- 2. FASTENER CAPACITIES VALUES ON THIS APPROVAL ARE (ASD) ALLOWABLE DESIGN CAPACITIES (ASD).
- ANCHORS ARE MANUFACTURED FROM HEAT-TREATED STEEL WITH AN 3. ALTERNATING HIGH-LOW THREAD FORM AND SHALL HAVE CORROSION-RESISTANT COATINGS AS DESCRIBED BELOW:
 - ULTRASHIELD OR WHITE ULTRASHIELD OR
 - BLUE OR SILVER CLIMASEAL OR
 - CLIMASHIELD
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH 4. MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS NOTICE OF ACCEPTANCE.
- CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS, WITH STRENGTH PROPERTIES AS SPECIFIED HEREIN. HOLLOW AND GROUT-FILLED CONCRETE 5. BLOCK SHALL CONFORM TO ASTM C-90.
- 6. REFERENCE THE FOLLOWING TEST REPORTS:
 HURRICANE ENGINEERING & TESTING, INC. #HETI-00-4160 (10/25/2000)
 - (10/25/2000) #HETI-00-4092 (02/25/2000) #HETI-00-4153 (10/25/2000) #HETI-00-4072 (02/25/2000) #HETI-01-5029 (05/07/2001) #HETI-01-5027 (05/07/2001) #HETI-01-C109 (01/16/2001) PDI ASENALT TECHNOLOCIES

 - #PRI ASPHALT TECHNOLOGIES, INC. #PRI 01078 (08/27/2001) #PRI 01079 (08/27/2001) APPLIED RESEARCH LABORATORIES #ARL 30291 (01/22/2002) #ARL 30292 (01/29/2002) #ARL 30299 (01/30/2002)
 - #ARL 30294 (01/30/2002) CENTER FOR APPLIED ENGINEERING, INC.
 - #MTS 25-7654-PS (06/03/1996)
 - CELOTEX CORPORATION TESTING SERVICES
 - #MTS 520614-PS (06/14/2000) WISS, JANNEY, ELSTNER ASSOCIATES, INC. (RECERTIFICATION TESTING)
 - # ITW 1/4" TAPCON STAINLESS STEEL STATIC TENSION-CONCRETE (4/17/2019)
 - # ITW 1/4" TAPCON STAINLESS STEEL STATIC SHEAR-CONCRETE (4/17/2019)
 - # ITW 1/4" TAPCON STAINLESS STEEL STATIC TENSION-CMU (4/17/2019)
 - # ITW 1/4" TAPCON STAINLESS STEEL STATIC SHEAR-CMU (4/29/2019) # ITW 5/16" TAPCON XL STATIC TENSION CONCRETE (4/23/2019)

 - # ITW 5/16" TAPCON XL STATIC SHEAR CONCRETE (4/29/2019)
- 7. ENGINEER SEAL AFFIXED HERETO VALIDATE STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE & FEDERAL CODES & FROM DEVIATIONS OF THIS DIAM
- 8. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT 9. PERMITTED AND INVALIDATE THIS CERTIFICATION.

PAGE INDEX:

SHEET INDEX

DESCRIPTION # SHEET

COVER SHEET 1

2 ANCHOR CAPACITY & INSTALLATION INSTRUCTIONS

TERMINOLOGY:

THE FOLLOWING ABBREVIATIONS MAY APPEAR IN THIS APPROVAL:

"ADDTL." FOR "ADDITIONAL", "AHJ" FOR "AUTHORITY HAVING JURISDICTION", "ALUM" FOR "ALUMINUM, "ASD" FOR "ALLOWABLE STRESS DESIGN", "BO" FOR "BUILD-OUT", "CS" FOR "CARBON STEEL", "EA." FOR "EACH", "E.D."/"EDGE"/"EDGE DIST." FOR "EDGE DISTANCE", "ELEV" FOR "ELEVATION", "EMBED" FOR "FLORIDA BUILDING CODE", "ft" OR " ' " FOR "FEET", "G" FOR "SPECIFIC GRAVITY", "GA" FOR "GAUGE", "GALV" FOR "GALVANIZED", "GFB" FOR "GROUT-FILLED BLOCK", "GR" FOR "GRADE", "HOLLOW" FOR "HOLLOW BLOCK", "HORIZ" FOR "HORIZONTAL", "HVHZ" FOR "HIGH-VELOCITY HURRICANE ZONE", "in" OR " " " FOR "INCHES", "INT" FOR "INTERIOR", "KSI" FOR "1,000 lb / in²", "L" FOR "LENGTH", "LB" FOR "POUND", "MAX" FOR "MAXIMUM, "MIN" FOR "MINIMUM", "N.T.S." FOR "NOT TO SCALE", "O.C." FOR "ON-CENTER", "P.E." FOR "PROFESSIONAL ENGINEER", "PERP" FOR "PERPENDICULAR", "PSF" FOR "POUNDS PER SQUARE FOOT (lb/ft2)", "PSI" FOR "POUNDS PER SQUARE INCH (lb/in²)", "QTY" FOR "QUANTITY", "REF." FOR "REFERENCE", "SCHED." FOR "SCHEDULE", "SDS" FOR "SELF-DRILLING SCREWS", "SMS" FOR "SHEET METAL SCREWS", "SPECS" FOR "SPECIFICATIONS", "SS" FOR "STAINLESS STEEL", "SUB" FOR "SUBMITTAL", "TAS" FOR "TESTING APPLICATION STANDARD", "TYP." FOR "TYPICAL", "ULT" FOR "ULTIMATE LOADS", "U.N.O." FOR "UNLESS NOTED OTHERWISE", "UTS" OR "Fu" FOR "ULTIMATE TENSILE STRENGTH/STRESS", "VERT" FOR "VERTICAL", "WLL" FOR "WORKING LOAD LIMIT", "W/" FOR "WITH", "W/O" FOR "WITHOUT", "YS" FOR "YIELD STRENGTH", "#" FOR "NUMBER", "&" FOR "AND", AND "Ø" FOR "DIAMETER".

CONTACT ENGINEERING EXPRESS FOR ADDITIONAL ABBREVIATION/TERMINOLOGY CLARIFICATIONS.



ANCHOR ALLOWABLE CAPACITY (ASD) & INSTALLATION INSTRUCTIONS:



TAPCON HEAD DIMENSIONS

Head Style	Head Height	Head Diameter
1/4" PFH	0.148"	0.471"
5/16" PFH	0.180"	0.540"
5/16" Flat Head	0.180"	0.540"
5/16" Button Head	0.200"	0.537"

TAPCON WASHER HEAD DIMENSIONS

Head Style	Head Height	Across Flat	Washer Diameter
1/4" HVVH	0.180"	0.308"	0.415"
5/16" HWH	0.221"	0.371"	0.493"

TAPCON LENGTHS

Part	Thread Length		
Length	1/4" SS Tapcon	5/16" Tapcon XL	
1-1/4"	Full Thread	(/////	
1-3/4"	Full Thread		
2-1/4"	2-1/8"	2-1/8"	
2-3/4"	2-1/8"	2-1/8"	
3-1/4"	2-1/8"	2-1/8"	
3-3/4"	2-1/8"	2-1/8"	
4"	2-1/8"		
5"	2-1/8"		
6"	2-1/8"		

EMBEDMENT

1-3/4" †

1-1/4"

1-3/4"

1-3/4"

2-1/4"

1-3/4" ††

HOLLOW

BLOCK

CONCRETE

(2899 PSI MIN)

GROUT FILLED

BLOCK

THRU 2x WOOD

BUCK (G=0.36 MIN)

TO 3KSI MIN

CONCRETE

5/16" CARBON STEEL TAPCON XL: 1/4" STAINLESS STEEL TAPCONS: ALLOWABLE LOADS

5			ALLOWABI
EDGE DISTANCE	TENSION (LB)	SHEAR (LB)	
4"	261 LB	570 LB	HOLLOW BLOCK
1-9/16"	220	333	
2-3/16"	253	431	CONODETE
3-1/8"	253	543	CONCRETE (3192 PSI MIN)
1-9/16"	424	382	(01021 01 10114)
2-3/16"	473	626	
3-1/8"	490	627	
4 11	487	706	
4"	942	785	

312

ALLOWABLE LOADS

		_
	EMBEDMENT	
HOLLOW BLOCK	1-1/4"	
	1"	ŀ
CONCRETE (3192 PSI MIN)		
(01021 01 1111)		ŀ

† EMBEDMENT IS THR	ROUGH 1-1/4" FAC	E SHELL OF HO	DLLOW BLO	СК

1-3/4

†† EMBEDMENT DEPTH IS INTO 3KSI CONCRETE, WITH THE WOOD BUCK LOCATED BETWEEN CONCRETE AND SIDE MEMBER

