



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

**NOTICE OF ACCEPTANCE (NOA)**

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**Tecnicas Expansivas S.L.**  
**Segador 13**  
**26006 Logrono, Spain**

**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: TDE / TLE Screw Anchor**

**APPROVAL DOCUMENT:** Drawing No. **MDTDLE00000**, titled "TDE / TLE Screw Anchor", Sheets 1 through 3 of 3, prepared by manufacturer, with revision 2 dated on 08/08/2023, signed and sealed by Jason R. Steen, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: None**

**LABELING:** Each box shall bear a permanent label with the manufacturer's name or logo, Ningbo City, Zhejiang Province, China and following statement: "Miami-Dade County Product Control Approved" or "MDCPCA", 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 **renews and revises NOA # 20-1103.16** and consists of this page 1, evidence page E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



03/19/24

NOA No: 23-0724.26  
Expiration Date: July 25, 2029  
Approval Date: March 28, 2024

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER NOA No. 18-1126.02**

**A. DRAWINGS**

1. Drawing No. **MDTDE00000**, titled “TDE Screw Anchor”, sheets 1 and 2 of 2, with revision 1, dated 06/05/2019, prepared by manufacture, signed and sealed by Jason Robert Steen, P.E.

**B. TESTS**

1. Test report on Tension and Shear Strength Design Values of 3/8”, 1/2”, 5/8” and 3/4” diameters Index Fixing Systems TDE concrete Screw Anchors per ACI 355.2/CC-ES AC193, and ASTM E 488, prepared by Element Materials Technology., Test Report No. **ESP025413P.2R1**, dated 08/08/2018, revised on 11/26/2018, signed and sealed by Thomas A. Kolden, P.E.
2. Test report on Corrosion Resistance of 3/8”, 1/2” 5/8” and 3/4” TDE Anchors per ASTM G 85, Annex 5 and TAS 114, Appendix E, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-10291**, dated 10/12/2018, signed and sealed by Idalmis Ortega, P.E.

**C. CALCULATIONS**

1. None.

**D. MATERIAL CERTIFICATIONS**

1. None.

**E. QUALITY ASSURANCE**

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

**F. STATEMENTS**

1. Statement letter of code conformance to the 6<sup>th</sup> edition (2017) FBC and of no financial interest issued by Element Materials Technology, dated 02/21/2019, signed and sealed by Thomas A. Kolden, P.E.
2. Distribution agreement dated 03/29/2019 between Tecnicas Expansivas S.L. Spain and MiTek USA, Inc. signed by Mr. Valentin Gomez, General Manager and Mr. Steven Brekke, Engineering Manager on behalf of their respective companies.



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**Carlos M. Utrera, P.E.**  
**Product Control Examiner**  
**NOA No: 23-0724.26**  
**Expiration Date: July 25, 2029**  
**Approval Date: March 28, 2024**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**2. EVIDENCE SUBMITTED UNDER NOA # 20-1103.16 AND NEW**

**A. DRAWINGS**

1. Drawing No. **MDTDLE00000**, titled “TDE / TLE Screw Anchor”, Sheets 1 through 3 of 3, prepared by manufacturer, with revision 2 dated on 08/08/2023, signed and sealed by Jason R. Steen, P.E.

**B. TESTS “Submitted under NOA # 20-1103.16”**

1. Test report on Corrosion Resistance of 3/8”, 1/2” 5/8” and 3/4” TLE Anchors per ASTM G 85, Annex 5 and TAS 114, Appendix E, prepared by Hurricane Engineering & Testing Inc., Test Report No. **HETI-20-S428**, dated 10/01/2020, revised on 10/13/2020, signed and sealed by Rafael E. Droz-Seda, P.E.

**C. CALCULATIONS**

1. None.

**D. MATERIAL CERTIFICATIONS**

1. None.

**E. QUALITY ASSURANCE**

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

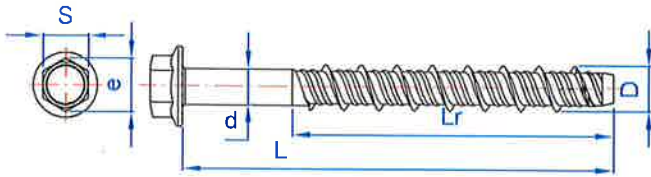
**F. STATEMENTS**

1. Drawing No. MDTDLE00000 statement of code conformance to the 8<sup>th</sup> edition (2023) of the FBC, and of no financial interest, issued by the manufacturer, dated 07/15/2023, signed and sealed by Jason R. Steen, P.E.
2. Statement letter of code conformance to the 7<sup>th</sup> edition FBC (2020) and of no financial interest, issued by Hurricane Engineering & Testing Inc., dated on 10/13/2020, signed and sealed by Rafael E. Droz-Seda, P.E. “**Submitted under NOA # 20-1103.16**”
3. Distribution agreement dated 01/08/2024 between Tecnicas Expansivas S.L. and Aerosmith Fastening Systems. signed by Valentin Gomez, General Manager and Spencer Jessee, President, respectively.



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**Carlos M. Utrera, P.E.**  
**Product Control Examiner**  
**NOA No: 23-0724.26**  
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**GENERAL NOTES**

- THIS PRODUCT HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE FLORIDA BUILDING CODE EIGHT EDITION (2023), FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, AND THE FOLLOWING STANDARDS: ASTM E488, ASTM G85, AND TAS 144.
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS NOTICE OF ACCEPTANCE.
- CONCRETE SHALL CONFORM TO ACI 301: NORMAL WEIGHT CONCRETE HAVING A SPECIFIED COMPRESSIVE STRENGTH OF 2500 psi TO 8500 psi.
- ANCHORS REPRESENTED HEREIN SHALL HAVE AN ATLANTIC EPOXY CORROSION RESISTANT COATING (TDE) OR ZINC PLATED ACCORDING TO ASTM B633 TYPE SC1 CLASS III (TLE) IN COMPLIANCE WITH THE FLORIDA BUILDING CODE.
- ANCHORS SHALL BE INSTALLED IN CRACKED OR UNCRACKED CONCRETE SUBSTRATES, AS DEFINED IN ACI 305.2.
- ANCHOR SPACING AND EDGE DISTANCES BELOW THE MINIMUM ONES SHOWN IN INSTALLATION TABLES HEREIN ARE NOT ACCEPTABLE.
- ALLOWABLE LOAD CAPACITIES TO SUBSTRATES THAT ARE NOT SHOWN IN THE DESIGN TABLES LISTED HEREIN ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND SHALL BE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER.
- ANCHOR VALUES LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMED.
- REFERENCE THE FOLLOWING TEST REPORTS:  
ELEMENT MATERIALS TECHNOLOGY:  
REPORT ESP025413P.2R1  
FENESTRATION TESTING LABORATORY INC:  
CERTIFICATE NUMBER 16-0425.08  
AUTH. No: FTL-18849  
PROJECT NUMBER: 18-8115  
LAB. NUMBER: 10291  
HURRICANE ENGINEERING & TESTING INC  
REPORT NO: HETI-20-S430

CODE	CODE	D	d	L	Lr	s	e min	MARK
TDE38234	TLE38234			2-3/4	2-1/2			3/8 x 2-3/4
TDE38300	TLE38300			3	2-1/2			3/8 x 3
TDE38314	TLE38314			3-1/4	2-1/2			3/8 x 3-1/4
TDE38312	TLE38312			3-1/2	2-1/2			3/8 x 3-1/2
TDE38334	TLE38334			3-3/4	2-1/2			3/8 x 3-3/4
TDE38400	TLE38400			4	4			3/8 x 4
TDE38414	TLE38414	0.469	3/8	4-1/4	4	9/16	0.614	3/8 x 4-1/4
TDE38412	TLE38412			4-1/2	4			3/8 x 4-1/2
TDE38434	TLE38434			4-3/4	4			3/8 x 4-3/4
TDE38500	TLE38500			5	4			3/8 x 5
TDE38514	TLE38514			5-1/4	4			3/8 x 5-1/4
TDE38512	TLE38512			5-1/2	4			3/8 x 5-1/2
TDE38534	TLE38534			5-3/4	4			3/8 x 5-3/4
TDE38600	TLE38600			6	4			3/8 x 6
TDE12312	TLE12312			3-1/2	3			1/2 x 3-1/2
TDE12334	TLE12334			3-3/4	3			1/2 x 3-3/4
TDE12400	TLE12400			4	3			1/2 x 4
TDE12414	TLE12414			4-1/4	3			1/2 x 4-1/4
TDE12412	TLE12412			4-1/2	3			1/2 x 4-1/2
TDE12434	TLE12434			4-3/4	3			1/2 x 4-3/4
TDE12500	TLE12500			5	5			1/2 x 5
TDE12514	TLE12514			5-1/4	5			1/2 x 5-1/4
TDE12512	TLE12512	0.598	1/2	5-1/2	5	3/4	0.820	1/2 x 5-1/2
TDE12534	TLE12534			5-3/4	5			1/2 x 5-3/4
TDE12600	TLE12600			6	5			1/2 x 6
TDE12614	TLE12614			6-1/4	5			1/2 x 6-1/4
TDE12612	TLE12612			6-1/2	5			1/2 x 6-1/2
TDE12634	TLE12634			6-3/4	5			1/2 x 6-3/4
TDE12700	TLE12700			7	5			1/2 x 7
TDE12712	TLE12712			7-1/2	5			1/2 x 7-1/2
TDE12800	TLE12800			8	5			1/2 x 8

CODE	CODE	D	d	L	Lr	S	e min	MARK
TDE58312	TLE58312			3-1/2	3			5/8 x 3-1/2
TDE58334	TLE58334			3-3/4	3			5/8 x 3-3/4
TDE58400	TLE58400			4	4			5/8 x 4
TDE58414	TLE58414			4-1/4	4			5/8 x 4-1/4
TDE58412	TLE58412			4-1/2	4			5/8 x 4-1/2
TDE58434	TLE58434			4-3/4	4			5/8 x 4-3/4
TDE58500	TLE58500			5	4			5/8 x 5
TDE58514	TLE58514			5-1/4	4			5/8 x 5-1/4
TDE58512	TLE58512	0.737	5/8	5-1/2	4	15/16	1.030	5/8 x 5-1/2
TDE58534	TLE58534			5-3/4	4			5/8 x 5-3/4
TDE58600	TLE58600			6	6			5/8 x 6
TDE58614	TLE58614			6-1/4	6			5/8 x 6-1/4
TDE58612	TLE58612			6-1/2	6			5/8 x 6-1/2
TDE58634	TLE58634			6-3/4	6			5/8 x 6-3/4
TDE58700	TLE58700			7	6			5/8 x 7
TDE58712	TLE58712			7-1/2	6			5/8 x 7-1/2
TDE58800	TLE58800			8	6			5/8 x 8
TDE34414	TLE34414			4-1/4	4			3/4 x 4-1/4
TDE34412	TLE34412			4-1/2	4			3/4 x 4-1/2
TDE34434	TLE34434			4-3/4	4			3/4 x 4-3/4
TDE34500	TLE34500			5	5			3/4 x 5
TDE34514	TLE34514			5-1/4	5			3/4 x 5-1/4
TDE34512	TLE34512			5-1/2	5			3/4 x 5-1/2
TDE34534	TLE34534			5-3/4	5			3/4 x 5-3/4
TDE34600	TLE34600			6	5			3/4 x 6
TDE34614	TLE34614	0.862	3/4	6-1/4	5	1 1/8	1.230	3/4 x 6-1/4
TDE34612	TLE34612			6-1/2	5			3/4 x 6-1/2
TDE34634	TLE34634			6-3/4	5			3/4 x 6-3/4
TDE34700	TLE34700			7	7			3/4 x 7
TDE34712	TLE34712			7-1/2	7			3/4 x 7-1/2
TDE34800	TLE34800			8	7			3/4 x 8
TDE34812	TLE34812			8-1/2	7			3/4 x 8-1/2
TDE34900	TLE34900			9	7			3/4 x 9
TDE34912	TLE34912			9-1/2	7			3/4 x 9-1/2
TDE34100	TLE34100			10	7			3/4 x 10



**PRODUCT REVISED**  
as complying with the Florida Building Code  
NOA-No. 23-0724.26

Expiration Date 07/25/2029

By *[Signature]*  
**Miami-Dade Product Control**

					Page: 1/3
					Revision: 2
					Date: 2023.06.08
2	2023.06.08	A. GRAU	S. REIG	FBC 2023	Manufacturer:
1	2021.03.17	H. SAENZ	S. REIG	INSTALLATION TABLE	Técnicas Expansivas S.L.
0	2021.03.09	V. NIETO	S. REIG	INITIAL EDITION	Segador 13 Logroño (Spain)
Rev	Date	Drawn	Approv.	Description	Drawing No:
TDE/TLE SCREW ANCHOR					MDTDLE00000

INSTALLED CONDITION



ANCHOR INSTALLATION INFORMATION

Characteristic	Symbol	Unit	Nominal Anchor Diameter							
			3/8"		1/2"		5/8"		3/4"	
Drill Bit Diameter	$d_b$	in (mm)	3/8 (9.5)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)	5/8 (15.9)	5/8 (15.9)	3/4 (19.1)	3/4 (19.1)
Nominal Embedment Depth	$h_{nom}$	in (mm)	2 1/4 (64)	3 1/4 (83)	3 (76)	4 1/2 (100)	3 1/2 (83)	5 (127)	4 (102)	6 1/2 (159)
Effective Embedment Depth	$h_{ef}$	in (mm)	1.65 (47)	2.49 (63)	2.21 (56)	3.27 (83)	2.36 (60)	3.65 (98)	2.97 (75)	4.89 (124)
Minimum Hole Depth	$h_{min}$	in (mm)	2 1/4 (70)	3 1/2 (89)	3 3/8 (86)	4 5/8 (117)	3 3/8 (89)	5 3/8 (137)	4 3/8 (111)	6 3/8 (168)
Fixture Hole Diameter	$d_f$	in (mm)	1/2 (12.7)		5/8 (15.9)		3/4 (19.1)		7/8 (22.2)	
Maximum Installation Torque	$T_{inst max}$	R.lb (N.m)	35 (47)	50 (68)	45 (61)	65 (88)	85 (115)	100 (136)	115 (159)	150 (203)
Maximum impact wrench torque rating	$T_{imp max}$	R.lb (N.m)	380 (515)	380 (515)	380 (515)	380 (515)	380 (515)	380 (515)	380 (515)	380 (515)
Minimum Concrete Thickness	$t_{min}$	in (mm)	4 (102)	4 1/2 (121)	4 3/4 (121)	6 3/4 (171)	5 (127)	7 (178)	8 (203)	8 1/8 (206)
Critical Edge Distance	$c_{cr}$	in (mm)	4 (102)	5 (127)	4 1/2 (114)	5 (127)	3 3/4 (95)	7 (178)	4 1/2 (114)	8 (203)
Minimum Edge Distance ( $c_{min}$ )	$c_{min}$	in (mm)	1 1/2 (38)	1 1/2 (38)	1 3/4 (44)	1 3/4 (44)	1 3/4 (44)	1 3/4 (44)	1 3/4 (44)	1 3/4 (44)
Minimum Spacing ( $s_{min}$ )	$s_{min}$	in (mm)	3 (76)	3 (76)	3 (76)	3 (76)	4 (102)	4 (102)	4 (102)	4 (102)
Minimum Overall Anchor Length	$L_{min}$	in (mm)	2 3/4 (70)	3 1/2 (89)	3 1/4 (82)	4 1/2 (114)	3 1/2 (89)	5 1/4 (133)	4 1/4 (108)	6 1/2 (165)
Torque Wrench Socket Size	-	in	7/16		1/4		5/16		1 1/8	
Maximum Fixture Thickness*	$t_{max}$	in (mm)	L 2 1/2 (L-64)	L 3 1/4 (L-83)	L 3 (L-76)	L 4 1/4 (L-108)	L 3 1/4 (L-83)	L 5 (L-127)	L 4 (L-102)	L 6 1/4 (L-159)

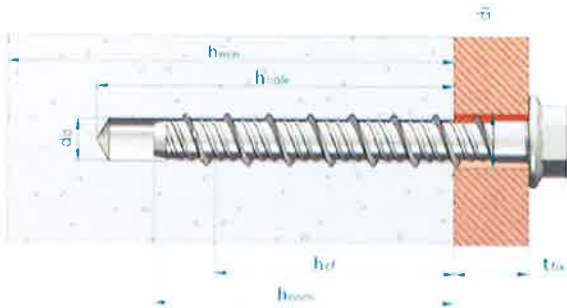
1 The tabulated data is to be used in conjunction with the design criteria given in ACI 318-14 Chapter 17 or ACI 318-11 Appendix D, as applicable.  
2 L = total anchor length



**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
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 By [Signature]  
 Miami-Dade Product Control

TDE/TLE SCREW ANCHOR	DRAWING NO. MDTDLE00000	PAGE: 2/3	REVISION: 2
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INSTALLED CONDITION



ANCHOR DESIGN INFORMATION

Characteristic	Symbol	Unit	Nominal Anchor Diameter							
			3/8"		1/2"		5/8"		3/4"	
Nominal Embedment Depth	$h_{nom}$	in	2 1/2	3 1/4	3	4 1/4	3 1/4	5	4	6 1/4
Anchor Category	1, 2 or 3	-	1							
<b>Steel Strength in Tension and Shear</b>										
Minimum specified ultimate strength	$f_u$	psi	111,000		107,000		102,000		99,000	
Minimum specified yield strength	$f_y$	psi	88,800		85,600		81,800		79,200	
Effective stress area (screw anchor body)	$A_{se}$	in <sup>2</sup>	0.0943		0.1768		0.2703		0.3888	
Steel Strength in Tension	$N_{ta}$	lb	10,465		18,920		27,570		39,480	
Strength Reduction Factor for Steel Failure in Tension	$\phi_{st}$	-	0.75							
Steel Strength in Shear	$V_{sa}$	lb	4,815	4,850	7,270	9,370	10,300	12,735	14,240	14,240
Steel Strength in Shear, Seismic	$V_{sa,se}$	lb	4,075	4,075	5,075	7,140	8,030	10,300	12,105	12,105
Strength Reduction Factor for Steel Failure in Shear	$\phi_{sh}$	-	0.65							
<b>Pullout Strength in Tension<sup>3</sup></b>										
Pullout Strength in Uncracked Concrete	$N_{u,uncr}$	lb	-	-	-	-	-	-	-	-
Pullout Strength in Cracked Concrete	$N_{u,cr}$	lb	-	-	3,225	-	-	-	-	-
Pullout Strength in Cracked Concrete, Seismic	$N_{u,cr,se}$	lb	-	-	3,225	-	-	-	-	-
Normalization Exponent, Uncracked Concrete	$n$	-	-	-	0.50	-	-	-	-	-
Normalization Exponent, Cracked Concrete	$n$	-	-	-	0.35	-	-	-	-	-
Strength Reduction Factor for Pullout Strength in Tension	$\phi_p$	-	0.65							
<b>Concrete Breakout Strength in Tension</b>										
Effective embedment	$h_{ef}$	in	1.85	2.49	2.21	3.27	2.36	3.85	2.97	4.89
Effectiveness Factor for Uncracked Concrete	$k_{uncr}$	-	27				24			
Effectiveness Factor for Cracked Concrete	$k_{cr}$	-	17		21		17			
Strength Reduction Factor for Concrete Breakout Strength in Tension	$\phi_{cb}$	-	0.65							
Axial stiffness in service load range in uncracked concrete	$\beta_{uncr}$	lb/in	63,150	207,850	139,250	140,060	222,870	254,980	292,630	305,530
Axial stiffness in service load range in cracked concrete	$\beta_{cr}$	lb/in	63,150	174,020	130,385	140,060	105,130	192,280	160,050	185,525
<b>Concrete Breakout Strength in Shear</b>										
Nominal Diameter	$d_n$	in	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
Load Bearing Length of Anchor	$l_b$	in	1.85	2.49	2.21	3.27	2.36	3.85	2.97	4.89
Reduction Factor for Concrete Breakout Strength in Shear	$\phi_{co}$	-	0.70							
<b>Concrete Pryout Strength in Shear</b>										
Coefficient for Pryout Strength	$k_{pr}$	-	1.0		2.0		1.0		2.0	
Reduction Factor for Pryout Strength in Shear	$\phi_{cp}$	-	0.70							



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TDE/TLE SCREW ANCHOR	DRAWING NO. MDTDLE00000	PAGE: 3/3	REVISION: 2
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