

Adhesive Anchoring Selection Guide



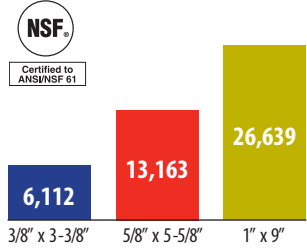

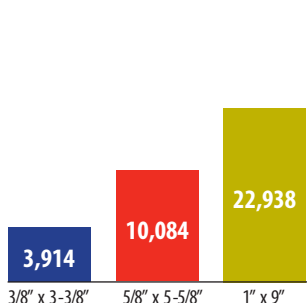


Doweling into Concrete with Rebar



Fastening to Concrete with Threaded Rod

Solid Concrete Applications

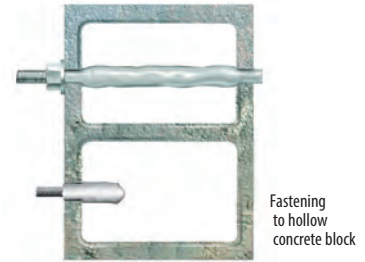
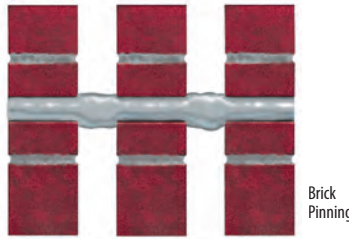
PRODUCT SYSTEMS	KEY FEATURES	PROPERTIES	STRENGTH DESIGN PERFORMANCE ¹																					
<p>A7+ The Most Versatile Quick Cure</p> <p>Works in more applications than the competition</p> <p>5 fluid oz. (150 ml) kit, 9.5 fluid oz. (280 ml) and 28 fluid oz. (825 ml) cartridges</p> 	<ul style="list-style-type: none"> The only quick-cure ICC-ES listed for use in all wet conditions Qualified for use in concrete, block, brick, and clay tile. Solid or hollow base materials Cures in only 45 minutes (at substrate temperature of 70°F/21°C) ICC-ES listing for cracked concrete and seismic applications (ICC-ES ESR 3903) ICC-ES listing for masonry applications (ICC-ES ESR 3951) No drip formula that allows direct-injection overhead installation 18 month shelf life NSF/ANSI 61 	<table border="1"> <thead> <tr> <th>BASE MATERIAL (F°/C°)</th> <th>GEL/WORKING TIME</th> <th>FULL CURE TIME</th> </tr> </thead> <tbody> <tr> <td>110°/ 43°</td> <td>1.5 minutes</td> <td>45 minutes</td> </tr> <tr> <td>90°/ 32°</td> <td>3 minutes</td> <td>45 minutes</td> </tr> <tr> <td>70°/ 21°</td> <td>5 minutes</td> <td>45 minutes</td> </tr> <tr> <td>50°/ 10°</td> <td>15 minutes</td> <td>90 minutes</td> </tr> <tr> <td>30°/ -1°</td> <td>35 minutes</td> <td>4 hours</td> </tr> <tr> <td>14°/ -10°</td> <td>35 minutes</td> <td>24 hours</td> </tr> </tbody> </table>	BASE MATERIAL (F°/C°)	GEL/WORKING TIME	FULL CURE TIME	110°/ 43°	1.5 minutes	45 minutes	90°/ 32°	3 minutes	45 minutes	70°/ 21°	5 minutes	45 minutes	50°/ 10°	15 minutes	90 minutes	30°/ -1°	35 minutes	4 hours	14°/ -10°	35 minutes	24 hours	<p>NSF® Certified to ANS/NSF 61</p>  <p>3,871 10,752 23,171</p> <p>3/8" x 3-3/8" 5/8" x 5-5/8" 1" x 9"</p>
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<p>C6+ For the Most Demanding Jobs</p> <p>Red Head's highest strength adhesive</p> <p>MADE IN USA WITH U.S. AND GLOBAL MATERIALS</p> <p>15.2 fluid oz. (450 ml) cartridges and 30.4 fluid oz. (900 ml) cartridges</p> 	<ul style="list-style-type: none"> At least 25% stronger than the old C6+ formulation for threaded rod in cracked concrete and with seismic conditions Fastest cure time in its class, curing in just 2.75 hours at 90°F and in only 2 hours at 110°F! ICC-ES listing for concrete (uncracked and cracked concrete, and seismic conditions) and masonry ICC-ES listing for use in core-drill holes, even in cracked concrete Can be used in oversized holes Can be used in core drilled holes Can be used in all wet conditions (saturated, water-filled, and submerged) European fire approval 24 month shelf life NSF/ANSI 61 	<table border="1"> <thead> <tr> <th>BASE MATERIAL (F°/C°)</th> <th>GEL/WORKING TIME</th> <th>FULL CURE TIME</th> </tr> </thead> <tbody> <tr> <td>110°/ 43°</td> <td>10 minutes</td> <td>2 hours</td> </tr> <tr> <td>90°/ 32°</td> <td>14 minutes</td> <td>2.75 hours</td> </tr> <tr> <td>70°/ 21°</td> <td>16 minutes</td> <td>6.5 hours</td> </tr> <tr> <td>50°/ 13°</td> <td>30 minutes</td> <td>24 hours</td> </tr> <tr> <td>40°/ 7°</td> <td>46 minutes</td> <td>48 hours</td> </tr> </tbody> </table>	BASE MATERIAL (F°/C°)	GEL/WORKING TIME	FULL CURE TIME	110°/ 43°	10 minutes	2 hours	90°/ 32°	14 minutes	2.75 hours	70°/ 21°	16 minutes	6.5 hours	50°/ 13°	30 minutes	24 hours	40°/ 7°	46 minutes	48 hours	<p>NSF® Certified to ANS/NSF 61</p>  <p>6,112 13,163 26,639</p> <p>3/8" x 3-3/8" 5/8" x 5-5/8" 1" x 9"</p>			
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<p>G5+ Everyday Epoxy</p> <p>Economical general-purpose adhesive</p> <p>MADE IN USA WITH U.S. AND GLOBAL MATERIALS</p> <p>15.2 fluid oz. (450 ml) cartridges and 30.4 fluid oz. (900 ml) cartridges</p> 	<ul style="list-style-type: none"> At least 50% stronger than the old G5 formulation for threaded rod in cracked concrete and with seismic conditions Cures 3x faster than the old G5 formula Now works down to 40°F ICC-ES listing for concrete (uncracked and cracked concrete, and seismic conditions) Formulated for warm weather with at least 10 minutes of working time Can be used in oversized holes Can be used in core drilled holes Can be used in all wet conditions (saturated, water-filled, and submerged) 24 month shelf life NSF/ANSI 61 	<table border="1"> <thead> <tr> <th>BASE MATERIAL (F°/C°)</th> <th>GEL/WORKING TIME</th> <th>FULL CURE TIME</th> </tr> </thead> <tbody> <tr> <td>110°/ 43°</td> <td>10 minutes</td> <td>4 hours</td> </tr> <tr> <td>90°/ 32°</td> <td>14 minutes</td> <td>6 hours</td> </tr> <tr> <td>70°/ 21°</td> <td>16 minutes</td> <td>8 hours</td> </tr> <tr> <td>50°/ 13°</td> <td>30 minutes</td> <td>30 hours</td> </tr> <tr> <td>40°/ 7°</td> <td>46 minutes</td> <td>48 hours</td> </tr> </tbody> </table>	BASE MATERIAL (F°/C°)	GEL/WORKING TIME	FULL CURE TIME	110°/ 43°	10 minutes	4 hours	90°/ 32°	14 minutes	6 hours	70°/ 21°	16 minutes	8 hours	50°/ 13°	30 minutes	30 hours	40°/ 7°	46 minutes	48 hours	<p>NSF® Certified to ANS/NSF 61</p>  <p>3,914 10,084 22,938</p> <p>3/8" x 3-3/8" 5/8" x 5-5/8" 1" x 9"</p>			
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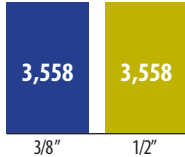

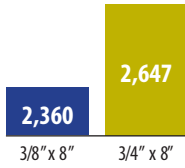

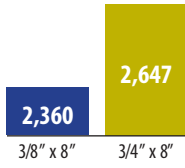

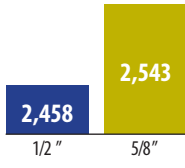
¹Diameter x Embedment in 4000 psi concrete. All loads given in pounds. Calculated using the ICC-ES threaded rod data in uncracked, dry concrete with periodic inspection. Temperature range A.

*Red head A7+ replaced Epon A7 and S7. Red Head C6+ replaced Epon C6+, and Red Head G5+ replaced Epon G5. For more information on the retired adhesives (Epon A7, S7, C6+ and G5), please visit www.itwredhead.com

Hollow Base Material Applications

Use the following accessories with the A7+ adhesive anchoring system for all of your hollow base material applications.



SYSTEM ACCESSORIES	KEY FEATURES	ULTIMATE TENSILE ^{1,2} PERFORMANCE (LBS.)						
<h2>Umbrella Anchor</h2>  <p>Umbrella Anchor</p> <p>Makes it possible to use adhesive for fastening to the face of hollow block or tile (see page 60-61)</p>	<ul style="list-style-type: none"> Highest hold in hollow block 1/4", 3/8", or 1/2" rods Fasten to front face of blocks Creates large bearing surface inside block to achieve high loads 	<p>A7+</p>  <table border="1"> <tr> <th>Size</th> <th>Tensile (LBS.)</th> </tr> <tr> <td>3/8"</td> <td>3,558</td> </tr> <tr> <td>1/2"</td> <td>3,558</td> </tr> </table>	Size	Tensile (LBS.)	3/8"	3,558	1/2"	3,558
Size	Tensile (LBS.)							
3/8"	3,558							
1/2"	3,558							
<h2>Nylon Screen Tubes</h2>  <p>Makes it possible to use adhesive for fastening to hollow block or brick walls (see page 64)</p>	<ul style="list-style-type: none"> 3/8" to 3/4" diameter sizes 30%-50% lower cost than stainless screens Special design makes screens easier to insert through block or brick Does not get bent or crushed Corrosion resistant 	<p>A7+</p>  <table border="1"> <tr> <th>Size</th> <th>Tensile (LBS.)</th> </tr> <tr> <td>3/8" x 8"</td> <td>2,360</td> </tr> <tr> <td>3/4" x 8"</td> <td>2,647</td> </tr> </table>	Size	Tensile (LBS.)	3/8" x 8"	2,360	3/4" x 8"	2,647
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<h2>Stainless Steel Screen Tubes</h2>  <p>Makes it possible to use adhesive for fastening to hollow block or brick walls (see page 64)</p>	<ul style="list-style-type: none"> 1/4" & 3/4" diameter sizes Corrosion resistant Available in 1/4" thicknesses 	<p>A7+</p>  <table border="1"> <tr> <th>Size</th> <th>Tensile (LBS.)</th> </tr> <tr> <td>3/8" x 8"</td> <td>2,360</td> </tr> <tr> <td>3/4" x 8"</td> <td>2,647</td> </tr> </table>	Size	Tensile (LBS.)	3/8" x 8"	2,360	3/4" x 8"	2,647
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3/4" x 8"	2,647							
<h2>Short Screen Tubes</h2>  <p>Makes it possible to use adhesive for fastening to the face of hollow block or tile (see page 61)</p>	<ul style="list-style-type: none"> 1/4", 3/8", 1/2", 5/8" diameter sizes Fasten to front face of block Anchor remains perpendicular in wall 	<p>A7+</p>  <table border="1"> <tr> <th>Size</th> <th>Tensile (LBS.)</th> </tr> <tr> <td>1/2"</td> <td>2,458</td> </tr> <tr> <td>5/8"</td> <td>2,543</td> </tr> </table>	Size	Tensile (LBS.)	1/2"	2,458	5/8"	2,543
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1/2"	2,458							
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¹ Testing performed in hollow concrete block.

² Diameter x Embedment.