

AC100+Gold

Instruction Card

DESCRIPTION: AC100+Gold is an easy dispensing, rapid-curing, high strength anchoring adhesive which is formulated for use by trained professionals. Please refer to installation instructions and SDS for additional detailed information.

PRECAUTION: Safety glasses and dust masks should be used when drilling holes into concrete, stone and masonry. Wear gloves and safety glasses when handling and dispensing adhesive. Do not sand the adhesive and create silica dust which could be inhaled. Avoid skin and eye contact. Use a NIOSH-approved chemical mask to avoid respiratory discomfort if working indoors or in a confined area, or if sensitive to adhesive odors. Wash hands or other affected body parts with soap and water if skin contact occurs. Flush eyes with plenty of water and seek immediate medical attention if eye contact occurs. Move to fresh air if adhesive odor begins to cause discomfort.

IMPORTANT! Before using, read and review Safety Data Sheet (SDS). This product contains crystalline silica and as supplied does not pose a dust hazard. IARC classifies crystalline silica (quartz sand) as a Group I carcinogen based upon evidence among workers in industries where there has been long-term and chronic exposure (via inhalation) to silica dust; e.g. mining, quarry, stone crushing, refractory brick and pottery workers. This product does not pose a dust hazard; therefore, this classification is not relevant. However, if reacted (fully cured) product is further processed (e.g. sanded, drilled) be sure to wear proper respiratory and eye protection to avoid health risk.


HANDLING AND STORAGE: Store in a cool, dry, well ventilated area at temperatures between 32°F (0°C) and 86°F (30°C). Keep away from excessive heat and flame. Keep partially used containers closed when not in use. Protect from damage. Store away from heat and light.

Before use see expiration date on product label. DO NOT USE EXPIRED PRODUCT. Partially used cartridges may be stored with hardened adhesive in the attached mixing nozzle. Note: If the cartridge is reused, attach a new mixing nozzle and discard the initial quantity of the anchor adhesive as described in the setting instructions (steps #3 and #5).

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[I.] Hole cleaning tools - wire brushes and air blowers

Fractional anchor sizes						 AIR BLOWERS Hand pump (volume 25 fl. oz.) Cat. # 8280 or compressed air nozzle (min. 90 psi)
Threaded rod dia. (inch)	Rebar size (No.)	Hammer-drill bit size (ANSI) ¹ (inch)	Min. brush diameter D _{min} (inch)	Brush length L (inches)	Steel wire brush (Cat. #)	
3/8	#3	7/16	0.475	6-3/4	08284	
1/2	-	9/16	0.600	6-3/4	08285	
-	#4	5/8	0.670	6-3/4	08275	
5/8	#5	11/16 or	0.735	7-7/8	08286	
		3/4	0.790	7-7/8	08278	
3/4	#6	7/8	0.920	7-7/8	08287	
7/8	#7	1	1.045	11-7/8	08288	
1	#8	1-1/8	1.175	11-7/8	08289	
1-1/4	#9	1-3/8	1.425	11-7/8	08290	
-	#10	1-1/2	1.550	11-7/8	08291	

A brush extension (Cat. #08282) must be used with a steel wire brush for holes drilled deeper than the listed brush length.

1. For installations with 5/8-inch threaded rod and #5 rebar size, the preferred ANSI drill bit diameter is 3/4-inch. If an 11/16-inch ANSI drill bit is used the user must check before injecting the adhesive to verify that the steel anchor element can be inserted into the cleaned borehole without resistance.

[II.] Gel (working) times and curing times

Temperature of Base Material		Gel (working) time	Full curing time
14°F	-10°C	90 min.	24 hr.
23°F	-5°C	90 min.	14 hr.
32°F	0°C	45 min.	7 hr.
41°F	5°C	25 min.	2 hr.
68°F	20°C	6 min.	45 min.
86°F	30°C	4 min.	25 min.
104°F	40°C	1.5 min.	15 min.


Linear interpolation for intermediate base materials temperatures is possible. For installations is base material temperature between 14°F and 23°F the cartridge temperature must be conditioned to between 68°F and 95°F (20°C and 35°C)

[III.] Installation parameters - Specifications for installation of threaded rods and reinforcing bars

Anchor property / Setting information	Threaded rod (inch) / reinforcing bar size (rebar)									
	3/8" or #3	1/2" #4	5/8" or #5	3/4" or #6	7/8" or #7	1" or #8	#9	1-1/4"	#10	
d = Nominal anchor rod diameter (in.)	0.375	0.500	0.625	0.750	0.875	1.000	-	1.250	-	
d = Nominal rebar diameter (in.)	0.375	0.500	0.625	0.750	0.875	1.000	1.125	-	1.250	
d _o (d _{bit}) = Nominal ANSI drill bit size (in.)	7/16	9/16	5/8	11/16 or 3/4	7/8	1	1-1/8	1-3/8	1-1/2	
h _{ef,min} = Minimum embedment (inches)	2-3/8	2-3/4	3-1/8	3-1/2	3-1/2	4	5	5	5	
h _{ef,max} = Maximum embedment (inches)	4-1/2	6	7-1/2	9	10-1/2	12	15	15	15	
s _{min} = Minimum spacing (inches)	1-7/8	2-1/2	3-1/8	3-3/4	4-3/8	5	6-1/4	6-1/4	6-1/4	
c _{min} = Minimum edge distance (inches)	1-3/4	1-3/4	1-3/4	1-3/4	1-3/4	1-3/4	2-1/4	2-3/4	2-3/4	
h _{min} = Minimum member thickness (inches)	h _{ef} + 1-1/4					h _{ef} + 2d _o				
T _{max} = Maximum rod torque (ft.-lb.)	15	33	60	105	125	165	-	280	-	
T _{max} = Maximum torque (ft.-lb.) for A36/A307 carbon steel rod	10	25	50	90	125	165	-	280	-	
T _{max} = Maximum torque (ft.-lb.) for Grade B8 / B8M Class I rod	5	20	40	60	100	165	-	280	-	

For installations between the minimum edge distance and 5d, the tabulate maximum torque must be reduced (multiplied) by a factor of 0.45.

[V.] Adhesive piston plugs

Threaded rod diameter (inch)	Rebar size (no.)	Drill bit diameter (inch)	Plug size	Plastic Plug (Cat. #)	Horizontal & overhead installations ^{1,2}
1/2	#4	9/16	9/16	08302	
5/8	#5	11/16	11/16	08258	
		3/4	3/4	08259	
3/4	#6	7/8	7/8	08300	
7/8	#7	1	1	08301	
1	#8	1-1/8	1-1/8	08303	
1-1/4	#9	1-3/8	1-3/8	08305	
-	#10	1-1/2	1-1/2	08309	

1. A plastic extension tube (Cat. #08281) or equivalent approved by DeWALT / Powers must be used with piston plugs
2. All listed overhead anchor installations, and horizontal installations with embedments greater than 8 inches require piston plugs


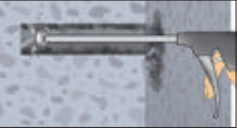

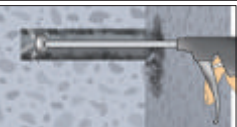
[IV.] AC100+Gold adhesive anchor system selection table


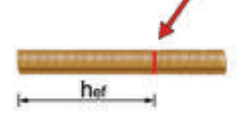
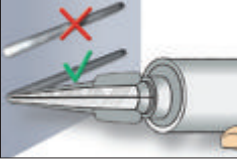
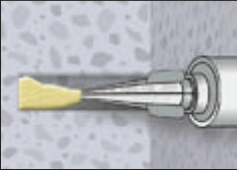
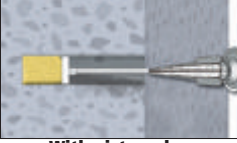
Injection tool	AC 100+ Gold plastic cartridge system	Extra mixing nozzle
10 fl. oz. manual dispensers (caulking gun)	Cat. #08437 - Standard all-metal Cat. #08479 - High performance plastic	5 fl. oz. Push-Pak w/ nozzle Cat. #8426SD Mixing nozzle and extension tube Cat. #08293
10 fl. oz. manual dispensers (caulking gun)	Cat. #08437 - Standard all-metal Cat. #08479 - High performance plastic	10 fl. oz. Quik-Shot w/ nozzle Cat. #8478SD Mixing nozzle and extension tube Cat. #08293
8 fl. oz. manual dispenser	Cat. #08484 - Standard all-metal	8 fl. oz. dual cartridge w/ nozzle Cat. #8480SD Mixing nozzle and extension tube Cat. #08293
8 & 12 fl. oz. manual dispenser	Cat. #08485 - High performance plastic	8 fl. oz. dual cartridge w/ nozzle Cat. #8480SD Mixing nozzle and extension tube Cat. #08293
8 & 12 fl. oz. manual dispenser	Cat. #08485 - High performance plastic	12 fl. oz. dual cartridge w/ nozzle Cat. #8486SD Mixing nozzle and extension tube Cat. #08293 or #08294
28 fl. oz. manual dispenser	Cat. #08495 - Manual high performance plastic Cat. #08496 - Pneumatic tool Cat. #08496 - Cordless battery tool	28 fl. oz. dual cartridge w/ long nozzle and extension tube Cat. #08490SD Long mixing nozzle w/ extension tube Cat. #08294





A plastic extension tube (Cat. #08281) or equivalent approved by DeWALT / Powers must be used for embedment depths greater than 7-1/2".

Installation instructions for solid base material – For any application not covered by this document please contact DEWALT / Powers

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SELECT HAMMER DRILLING AS SUITABLE FOR APPLICATION	
HAMMER DRILLING	 <p>1. Drill a hole into the base material with rotary hammer drill to the size and embedment required by the selected steel hardware element (see Table III). Tolerances of carbide drill bits must meet ANSI Standard B212.15.</p> <p>⚠️ <i>Precaution: Wear suitable eye and skin protection. Avoid inhalation of dusts during drilling and/or removal.</i></p> <p><i>Note: In case of standing water in the drilled bore hole (flooded hole), all the water has to be removed from the hole (e.g. vacuum, compressed air, etc.) prior to cleaning.</i></p>
	 <p>2a. Starting from the bottom or back of the anchor hole, blow the hole clean a minimum of four times (4x).</p> <p>Use a compressed air nozzle (min. 90 psi) for all sizes of anchor rod and reinforcing bar(rebar). Alternatively a hand pump (min. volume 25 fl. oz. supplied by DEWALT / Powers) may be used for anchor rods 3/8" to 3/4" diameter or reinforcing bar (rebar) sizes #3 to #6 for embedments not more than 9 inches (a hand pump must not be used with larger anchor sizes).</p>
	 <p>2b. Determine brush diameter (see Table I) for the drilled hole and attach the brush with adaptor to a rotary drill tool or battery screw gun. Brush the hole with the selected wire brush a minimum of four times (4x).</p> <p>A brush extension (supplied by DEWALT / Powers) must be used for holes drilled deeper than the listed brush length. The wire brush diameter must be checked periodically during use ($\varnothing_{brush} > D_{min}$, see Table I). The brush should resist insertion into the drilled hole - if not the brush is too small and must be replaced with the proper brush diameter.</p>
	 <p>2c. Repeat Step 2a. again: Starting from the bottom or back of the anchor hole, blow the hole clean a minimum of four times (4x).</p> <p>Use a compressed air nozzle (min. 90 psi) for all sizes of anchor rod and reinforcing bar(rebar). Alternatively a hand pump (min. volume 25 fl. oz. supplied by DEWALT / Powers) may be used for anchor rods 3/8" to 3/4" diameter or reinforcing bar (rebar) sizes #3 to #6 for embedments not more than 9 inches (a hand pump must not be used with larger anchor sizes).</p> <p>When finished the hole should be clean and free of dust, debris, ice, grease, oil or other foreign material. Next go to step 3.</p>

PREPARATION	
	 <p>3. Check adhesive expiration date on cartridge label. Do not use expired product. Review Safety Data Sheet (SDS) before use. Cartridge temperature must be between 23°F - 104°F (-5°C - 40°C) when in use except as noted in Table II.</p> <p>Attach a supplied mixing nozzle to the cartridge. Do not modify the mixer in any way and make sure the mixing element is inside the nozzle. Load the cartridge into the correct dispensing tool.</p> <p><i>Note: Always use a new mixing nozzle with new cartridges of adhesive and also for all work interruptions exceeding the published gel (working) time of the adhesive.</i></p>
	 <p>4. Prior to inserting the anchor rod or rebar into the drilled bore hole, the position of the embedment depth has to be marked on the anchor. Verify anchor element is straight and free of surface damage.</p>
	 <p>5. Adhesive must be properly mixed to achieve published properties. Prior to dispensing adhesive into the drilled hole, separately dispense at least three full strokes of adhesive through the mixing nozzle until the adhesive is a consistent gray color.</p> <p>Review and note the published working and cure times (see Table II) prior to injection of the mixed adhesive into the cleaned anchor hole.</p>
	 <p>6. Fill the cleaned hole half to two-thirds full with mixed adhesive starting from the bottom or back of the anchor hole. Slowly withdraw the mixing nozzle as the hole fills to avoid creating air pockets or voids. For embedment depths greater than 7-1/2" an extension tube must be used with the mixing nozzle (see Table IV).</p>
INSTALLATION	 <p>With piston plug</p> <p>Piston plugs (see Table V) must be used with and attached to mixing nozzle and extension tube for horizontal and overhead installations except for anchor 3/8" diameter and rebar size #3. Insert piston plug to the back of the drilled hole and inject as described in the method above. During installation the piston plug will be naturally extruded from the drilled hole by the adhesive pressure.</p> <p>Attention! Do not install anchors overhead without proper training, and installation hardware provided by DEWALT / Powers; Contact DEWALT / Powers prior to use.</p>

INSTALLATION, CONTINUED	
	 <p>7. The anchor should be free of dirt, grease, oil or other foreign material. Push clean threaded rod or reinforcing bar into the anchor hole while turning slightly to ensure positive distribution of the adhesive until the embedment depth is reached. Observe the gel (working) time.</p>
	 <p>8. Be sure that the anchor element is installed to the specified embedment depth. Adhesive must completely fill the annular gap at the concrete surface. Following installation of the anchor element, remove excess adhesive. Protect the anchor element threads from fouling with adhesive. For all installations the anchor element must be fully restrained from movement throughout the specified curing period, where necessary through the use of temporary wedges, external supports, or other methods. Minor adjustments to the position of the anchor element may be performed during the gel time only.</p>
	 <p>9. Allow the adhesive anchor to cure to the specified full curing time prior to applying any load (see Table II).</p> <p>Do not disturb, torque or load the anchor until it is fully cured.</p>
CURING AND FIXTURE	 <p>10. After full curing of the adhesive anchor, a fixture can be installed to the anchor and tightened up to the maximum torque (shown in Table III) by using a calibrated torque wrench.</p> <p>Take care not to exceed the maximum torque for the selected anchor.</p> <p><i>Note: take care not to exceed the maximum torque for the selected anchor.</i></p>

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Follow steps #1 through #10 for recommended installation