

# Dynapoxy™ EP-430 Fast

## Specification Data Sheet



### Epoxy Adhesive, Patch, and Tamper Proof Joint Filler

#### 1. BASIC USES

- Chemical anchoring for bolts, dowels and pins
- Cap sealing and port setting
- Pressure-injection of cracks in structural concrete
- Bonding irregular surfaces
- Tamper proof security applications

#### 2. MANUFACTURER

Pecora Corporation  
165 Wambold Road  
Harleysville, PA 19438  
Phone: 215-723-6051  
800-523-6688  
Fax: 215-721-0286  
Website: www.pecora.com

#### 3. PRODUCT DESCRIPTION

Dynapoxy™ EP-430 Fast is a gap-filling, non-sag gel adhesive excellent for use as a dowel and anchor bolt grouting material. Also suitable for tamper proof security applications, repairing cracked concrete, setting ceramic tiles, bonding decorative blocks, sealing cracks for injection grouting and for vertical and overhead patchwork.

#### Advantages:

- Suitable for wet or damp holes
- For use in severe weathering locations
- Suitable for seismic conditions
- Allowed at close edge distances and shallow embedments
- Low odor
- For both solid and hollow base materials
- Fast Setting

#### Limitations:

- Precondition material to over 73°±2°F (23°C). **In cold weather** –precondition cartridges slowly to 80-90°F (27-32°C) for easier gunning.
- Substrate temperature should be above 40°F (5°C).
- Do not thin. Solvents will prevent proper cure.
- Use dried aggregate only.
- Minimum age of concrete must be 3-7 days, depending on curing and drying conditions.
- Do not allow mixed epoxy to reside in static mixing head or mixer for more than 5 minutes or gelation and blockage may result.

- Dynapoxy EP-430 Fast is a vapor barrier after cure.

#### PACKAGING

- 22 oz (600 ml) cartridge with mixer
- 1 gal (3.8L) kit - 1/2 gallon can Part A and 1/2 gallon can Part B
- 2 gal (7.6L) kit - 1 gallon can Part A and 1 gallon can Part B

#### 4. COVERAGE

- 22 oz cartridge – yields 37 in<sup>3</sup> (600 cm<sup>3</sup>)
- 1 gal of mixed epoxy – yields 231 in<sup>3</sup> (3746 cm<sup>3</sup>)

#### 5. TECHNICAL DATA

**Applicable standards:** Dynapoxy EP-430 Fast meets or exceeds the requirements of ASTM C-881, Types I, II\*, IV and V\*, Grade 3, Classes A, B and C as well as USDA specifications for use in food processing areas.

\*Except Gel Time

#### 6. INSTALLATION

**Cartridges:** Precondition material to over 73°±2°F (23°C). **In cold weather** – precondition cartridges slowly to 80-90°F (27-32°C) for easier gunning. To eliminate mixing and measuring, Dynapoxy EP-430 Fast can be easily dispensed from cartridges. Remove D plugs from small end of cartridge. Slide retaining nut over static mixer. Secure static mixer to cartridge by screwing retaining nut onto cartridge. For

easier gunning, the static mixer tip may be cut off to the third notch. Place assembled cartridge into approved pneumatic or hand gun. Extrude epoxy until a uniform gray color is achieved. Do not use epoxy with color streaks. Dispense under a constant uniform pressure. If dispensing is altered, re-establish a uniform gray color prior to continuing. When using a hand gun, release pressure from gun by pressing thumb button at every pause in dispensing. Otherwise, re-establish uniform gray color prior to continuing.

#### Bulk Units:

#### Automatic Dispensing Machines:

Only use Pecora approved positive displacement dispensing machines.

**Hand Mixing:** Precondition material to over 73°±2°F (23°C). Premeasure equal parts by volume of Part A and Part B in two separate containers. Use a third container to mix the two components together. Do not use one tapered container such as a Dixie paper cup, filling it half full of A and half full of B; the correct ratio (1:1) cannot be achieved due to tapered feature of container. Thoroughly mix for 3 minutes, scraping sides of container until uniform grey color is achieved. Only mix amount of epoxy that can be used within its gel time. Spread mixed epoxy out thin on a hawk to extend gel time. If you pile it up, the gel time will be shortened due to the greater mass and exotherm.

#### TYPICAL PHYSICAL PROPERTIES

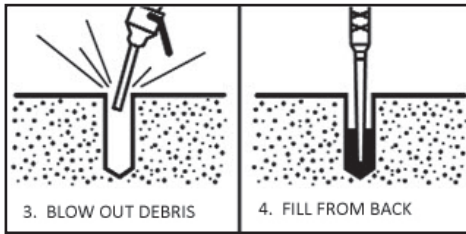
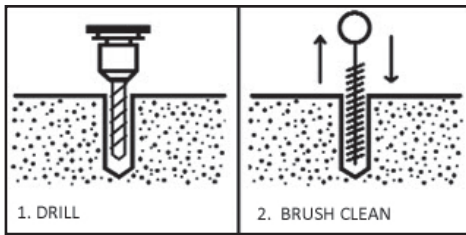
Test Property	Test Value	Test Procedure
Consistency	0 (no flow)	ASTM C-881
Gel Time (@ 73°F)	7 minutes	ASTM C-881 (>5 min. <sup>1,4</sup> )
Bond Strength (2-day cure)	2,934 psi	ASTM C-882 (1,000 psi <sup>1,4</sup> min.)
Bond Strength (14-day cure)	3,050 psi	ASTM C-882 (1,500 psi <sup>1,4</sup> min.)
Absorption	0.84%	ASTM D-570 (1.0% <sup>1,4</sup> max.)
Heat Deflection Temperature	126.3°F	ASTM D-648 (120°F <sup>1</sup> min.)
Linear Coefficient of Shrinkage	0.0009	ASTM D2566 (0.005 <sup>1,4</sup> max.)
Compressive Strength	10,880 psi	ASTM D-695 (8,000 psi <sup>1</sup> min.) (10,000 psi <sup>1</sup> min.)
Compressive Modulus	530,130 psi	ASTM D-695 (150,000 psi <sup>1</sup> min.) (200,000 psi <sup>1</sup> min.)
Elongation at Break	1.0%	ASTM D-638 (1.0% <sup>1,4</sup> min.)
VOC g/L	0	EPA Method 24

<sup>1</sup>CI ASTM C-881 Type I

<sup>3</sup>ASTM C-881 Type IV

<sup>2</sup>ASTM C-881 Type II

<sup>4</sup>ASTM C-881 Type V



### TO ANCHOR BOLTS, DOWELS, & PINS:

1. Drill holes to proper diameter and length.
2. Clean holes with a nylon brush.
3. Blow concrete dust from hole with oil-free compressed air from back forward.
4. After uniform color is achieved, static mixer should be placed in back of hole. Start extruding epoxy while pulling static mixer out, filling hole 1/2 full. Rotate the bolt slightly as it is inserted to the back of the hole. Refer to tables for annular space, embedment depth, and edge distances.

### TO SET PORTS & CAPSEAL CRACKS:

Dab a small amount of Dynapoxy EP-430 Fast to the back of a port and carefully center port over the crack. A centering nail may be helpful. Do not apply so much epoxy to back of port that it could close off the hole. After setting port, carefully butter the shoulder of the port and extend epoxy to 1/2in / 1.28 cm on either side of the crack. Continue placement of epoxy by buttering crack between ports. To avoid leaks under pressure, the epoxy should be applied to approx. 1/4in / .64cm. thick. Do not place epoxy once it starts curing or getting hot or sticky, as this will compromise capseal and cause leaking. Once epoxy is placed, it should not be disturbed during the curing process. Cure time depends on air temperature and mass of epoxy.

Normally a minimum of 2 hrs is necessary for Dynapoxy EP-430 Fast to fully cure at 73° ± 2°F / 23°C. Capseal must be fully cured prior to injection.

### TO BOND IRREGULAR SURFACES:

Apply the mixed Dynapoxy EP-430 Fast to the prepared substrates. Work into the substrate for positive adhesion. Secure or clamp the bonded surfaces firmly into place until the epoxy has cured. Glue line should not exceed 1/8 in / .32 cm

**Cleaning:** Uncured material can be removed with citrus cleaner or other approved solvent. Cured material can only be removed mechanically.

**Storage Life:** 24 months from date of manufacture when stored in original unopened containers at temperatures between 40°-95°F (5°-35°C).

**Precautions:** Part A of two-part Dynapoxy EP-430 Fast is an irritant. Part B of two-part Dynapoxy EP-430 Fast is corrosive. Use of safety goggles and chemical resistant gloves are recommended. Use of a NIOSH/OSHA organic vapor respirator is recommended if ventilation is inadequate. Avoid breathing vapors. Avoid skin contact. If Eye Contact occurs, flush immediately with water for at least 15 minutes. Contact physician immediately. If trouble breathing occurs, remove person to fresh air. If skin contact occurs, remove any contaminated clothing. Remove epoxy immediately with a dry cloth or paper towel. Solvents should not be used as they carry the irritant into the skin. Wash skin thoroughly with soap and water.  
**Cured epoxy resins are innocuous.**

**FOR PROFESSIONAL USE ONLY.  
KEEP OUT OF THE REACH OF CHILDREN.**

### 7. AVAILABILITY AND COST

Pecora products are available from stocking distributors nationwide. For the name and telephone number of your nearest representative, call the number below or visit our website at [www.pecora.com](http://www.pecora.com).

### 8. LIMITED 1 YEAR WARRANTY

Pecora Corporation warrants its products to be free of defects. Under this warranty, we will provide, at no charge, replacement materials for, or refund the purchase price of, any product proven to be defective when used in strict accordance with our published recommendations and in applications considered by us as suitable for this product. The determination of eligibility for this warranty or the choice of remedy available under this warranty, shall be made in our sole discretion and any decisions made by Pecora Corporation shall be final. This warranty is in lieu of any and all other warranties, expressed or implied, including but not limited to a warranty of merchantability or fitness for a particular purpose and in no case will Pecora be liable for damages other than those expressly stated in this warranty including but not limited to incidental or consequential damages.

### 9. TECHNICAL SERVICES

Local Pecora representatives are available to assist you in selecting an appropriate product and to provide on-site application instructions, or to conduct job-site inspections. For further information and assistance, please call our Technical Service department at 215-723-6051 or 800-523-6688.

### 10. FILING SYSTEMS

- Sweet's Catalog File: [www.sweets.com](http://www.sweets.com)
- General Building
  - 03010 Maintenance of Concrete
  - 03930 Concrete Rehabilitation

Ultimate Tension Values for Threaded Rod in Concrete *										
ANCHOR DIA (inches)	BIT DIA. (inches)	EMBEDMENT (inches)	ULTIMATE BOND STRENGTH IN CONCRETE (f <sup>3</sup> c)				ALLOWABLE STEEL STRENGTH (lbs)			
			2500 psi	3000 psi	4000 psi	5500 psi	A36/A307	A193 B7	300 Series Stainless	
3/8	7/16	1-11/16		5450				2100	4550	3630
3/8	7/16	3-3/8	7300		8250		9200	2100	4550	3630
3/8	7/16	3-3/8	9560					2100	4550	3630
3/8	7/16	5-5/8	10980		11360		11740	2100	4550	3630
1/2	9/16	2-1/4		7495				3750	8100	6470
1/2	9/16	4-1/2	10540		11730		12920	3750	8100	6470
1/2	11/16	4-1/2	14640					3750	8100	6470
1/2	9/16	7-1/2	14660		17010		19360	3750	8100	6470
5/8	3/4	2-13/16		13665				5870	12655	10130
5/8	3/4	5-5/8	14800		18870		22940	5870	12655	10130
5/8	7/8	5-5/8	23340					5870	12655	10130
5/8	3/4	9-3/8	21560		26260		30960	5870	12655	10130
3/4	7/8	3-3/8		17825				8460	18220	12400
3/4	7/8	6-3/4	22380		25870		29360	8460	18220	12400
3/4	1	6-3/4	29850					8460	18220	12400
3/4	7/8	11-1/4	30320		34340		38360	8460	18220	12400
7/8	1	3-15/16		21390				11500	24800	16860
7/8	1	7-7/8	43280					11500	24800	16860
1	1-1/8	4-1/2		27419				15020	32400	22020
1	1-1/8	9	55650					15020	32400	22020
1-1/4	1-3/8	11-1/4	77860					23480	50610	34420

Shear and Tension Values for Smooth Dowels*						
DOWEL DIAMETER (inches)	BIT DIAMETER (inches)	EMBEDMENT (inches)	ULTIMATE BOND STRENGTH (lbs.)		ALLOWABLE STEEL STRENGTH	
			TENSION	SHEAR	TENSION	SHEAR
			3000 psi	2500 psi	3000 psi	2500 psi
1/2	9/16	4-1/2	6040	8560	3750	1930
5/8	3/4	5-5/8	6760	13140	5880	3030
3/4	7/18	6-3/4	12000	18920	8460	4360
7/8	1	7-7/8	14220	25720	11500	5930
1	1-1/8	9	23280	33600	15020	7740

- \*1. 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. Linear interpolation may be used for concrete strengths between those listed.
2. Spacing and edge distance shall be in accordance with appropriate table.
3. Allowable load must be the lesser of the allowable steel strength and that allowable bond strength. Typically, allowable bond strength is equal to the ultimate bond strength divided by the safety factor of 4.
4. Allowable loads may be increased by 33-1/3% for short term loading due to earthquakes or wind.
5. Dynapoxy EP-430 Fast is recognized for installation in water-filled or moist holes, for use in locations subject to severe exterior weathering conditions and for resisting tension and shear loads due to earthquake and wind.

Dynapoxy EP-430 Fast Cure Times For Adhesive Anchors		
MINIMUM SUBSTRATE TEMP.	CURE TIME	MIN. CURE TIME
50°F (5°C)	48 hrs.	24 hrs.
60°F (18°C)	36 hrs.	12hrs.
70°F (21°C)	24 hrs.	8 hrs.
80°F (27°C)	24 hrs.	6 hrs.
90°F (32°C)	24 hrs.	4 hrs.
100°F (38°C)	12 hrs.	2 hrs.

1. Cure Time is time required before epoxy reaches ultimate strength. Minimum Cure Time is minimum time required before the design or allowable load may be applied.
2. Anchors are to be undisturbed during the minimum cure time.

Allowable Shear Values for Threaded Rod in 2000 psi Concrete *					
ANCHOR DIAMETER (inches)	BIT DIAMETER (inches)	EMBEDMENT (inches)	ALLOWABLE STEEL STRENGTH (lbs.)		
			A36/A307	A193 B7	300 SERIES STAINLESS
3/8	7/16	3-3/8	1080	2345	1870
1/2	9/16	4-1/2	1930	4170	3330
5/8	3/4	5-5/8	3030	6520	5220
3/4	7/8	6-3/4	4360	9390	6390
7/8	1	7-7/8	5930	12780	8680
1	1-1/8	9	7740	16690	11340
1-1/4	1-3/8	11-1/4	12100	26070	17730

\* See notes for table above

Allowable Anchor Spacing and Edge Distance			
	FULL ANCHOR CAPACITY Critical Distance (C cr)	REDUCED ANCHOR CAPACITY Distance (C min)	REDUCTION FACTOR
SPACING BETWEEN ANCHORS	24 D	8 D	.90
EDGE DISTANCE:			
TENSION LOADS	12 D	See following chart	See following chart
SHEAR LOADS – THREADED ROD	12 D	4 D	.21
SHEAR LOADS – SMOOTH DOWELS	12 D	4 D	.21
SHEAR LOADS - REBAR	16 D	4 D	.15

### Edge Distance for Tension Values for Anchors in Concrete\*

STUD SIZE (inches)	MINIMUM EDGE DISTANCE (C min)	REDUCTION FACTOR
3/8	1-1/2	.70
1/2	1-3/4	.66
5/8	1-3/4	.70
3/4	1-3/4	.70
7/8	3-1/2	.70
1	4	.70
1-1/4	5	.70

- \* 1. The listed values are the minimum distances required to obtain the load values in the tables above and to the left D = anchor diameter. When adjacent anchors are different sizes or embedments, use the largest value for D.
- 2. The listed values are the minimum distances at which the anchor can be installed when load values are adjusted in accordance with reduction factor
- 3. Load values in the table 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 are calculated separately and multiplied.

### Shear and Tension Values for Reinforcing Steel\*

ANCHOR DIAMETER (inches)	BIT DIAMETER (inches)	EMBEDMENT (inches)	TENSION ULTIMATE BOND STRENGTH (lbs) CONCRETE STRENGTH (f' c)			ALLOWABLE STEEL STRENGTH TENSION OR SHEAR (lbs)	
			2500 psi	4000 psi	5500 psi	Grade 40	Grade 60
# 3	1/2	3-3/8	7080	9050	11020	2200	2640
# 4	5/8	4-1/2	12300	14730	17160	4000	4800
# 5	3/4	5-5/8	16000	18810	21620	6200	7440
# 6	1	6-3/4	39035			8800	10560
# 7	1-1/8	7-7/8	36740			12000	14400
# 8	1-1/4	9	42670			15600	18720

\* See notes on previous page

### Estimating Guide for Number of Holes per Cartridge

		HOLE DEPTH (inches)																		
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>THREADED ROD IN CONCRETE</b>		<b>NUMBER OF HOLES PER CARTRIDGE</b>																		
ROD SIZE (inches)	HOLE SIZE (inches)	192	128	96	77	64	55	48	43	39	35	32	30	28	26	24	23	22	21	20
3/8	7/16	136	91	68	55	46	39	34	29	28	25	23	21	19	18	17	16	15	15	14
1/2	9/16	70	47	35	28	24	20	18	16	14	13	12	11	10	10	9	9	8	8	7
5/8	3/4	56	37	28	23	19	16	14	13	11	10	10	9	8	8	7	7	7	6	6
3/4	7/8	47	31	24	19	16	12	12	11	10	9	8	8	7	7	6	6	6	5	5
7/8	1	38	26	19	16	13	11	10	9	8	7	7	6	6	5	5	5	5	4	4
1	1-1/8	34	23	17	14	12	10	9	8	7	7	6	6	5	5	5	4	4	4	4
1-1/8	1-1/4	29	20	15	12	10	9	8	7	6	6	5	5	5	4	4	4	4	3	3
1-1/4	1-3/8	23	16	12	10	8	7	6	5	5	5	4	4	4	3	3	3	3	3	3
1-1/2	1-5/8																			
<b>REBAR IN CONCRETE</b>																				
REBAR SIZE (inches)	HOLE SIZE (inches)	163	109	82	66	55	47	41	37	33	30	28	26	24	22	21	20	19	18	17
No. 3	1/2	127	85	64	51	43	37	32	29	26	24	22	20	19	17	16	15	15	14	13
No. 4	5/8	103	69	52	41	35	30	26	23	21	19	17	16	15	14	13	12	12	11	11
No. 5	3/4	82	55	41	32	28	24	21	19	17	15	14	13	12	11	11	10	10	9	9
No. 6	7/8	72	48	36	29	24	21	18	16	15	13	12	11	11	10	9	9	8	8	8
No. 7	1	62	41	31	25	21	18	16	14	13	12	11	10	9	9	8	8	7	7	7
No. 8	1 1/8	31	21	16	13	11	9	8	7	7	6	6	5	5	4	4	4	4	4	3
No. 9	1 3/8	30	20	15	12	10	9	8	7	6	6	5	5	5	4	4	4	4	4	3
No. 10	1 1/2																			
<b>SMOOTH DOWEL IN CONCRETE</b>																				
DOWEL SIZE (inches)	HOLE SIZE (inches)	83	56	42	34	28	24	21	19	17	15	14	13	12	11	11	10	10	9	9
3/4	7/8	72	48	36	29	24	21	18	16	15	13	12	11	11	10	9	9	8	8	8
7/8	1	61	41	31	25	21	18	16	14	12	11	10	10	9	8	8	8	7	7	6
1	1 1/8	50	33	25	20	17	14	13	11	10	9	9	8	7	7	7	6	6	6	5
1 1/4	1 3/8	42	28	21	17	14	12	11	10	9	8	7	7	6	6	6	5	5	4	4
1 1/2	1 5/8																			

NOTE: Values for threaded Rod in Hollow & Grout Filled Block available on request



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