



Minnesota Department of Transportation

Office of Materials & Road Research

1400 Gervais Avenue
Maplewood, MN 55109-2044

Office Phone: 651-366-5592

Fax: 651-366-5461

April 5, 2013

(651) 366-5575

Mr. Robert Antoinette
Powers Fasteners Inc.
2 Powers Lane
Brewster, NY 10509

Re: Mn/DOT Approval of Pure 110+

Dear Mr. Antoinette:

The Minnesota Department of Transportation (Mn/DOT), Office of Materials and Road Research has reviewed the documentation you submitted for approval of Pure 110+ epoxy injection adhesive anchoring system. This product has been added to the "Mn/DOT Approved Concrete Anchorages" list. This approval is based on a minimum 3/8" diameter anchor with a minimum 3-3/8" embedment. This approval is also contingent upon satisfactory performance in the field.

Please note that it is the manufacturer's responsibility to immediately notify Mn/DOT if the product is changed or modified, or if the product is no longer being produced. If our testing determines that the product has changed, without prior notification from the manufacturer, the product may be removed from the approved product list.

All of our approved products are located on the Mn/DOT Concrete web site at <http://www.dot.state.mn.us/products/index.html>

If you have any questions or comments, please contact me at the above address.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. S. Mulvaney', with a long horizontal stroke extending to the right.

Ronald S. Mulvaney, P.E.
Structural Concrete Engineer

Cc: File

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Concrete anchorages - reinforcing bar applications

Products listed in the following table are approved for use on MnDOT projects unless otherwise indicated. Products prohibited from use in sustained tension applications may be used for applications which are not considered to carry sustained tension loads. Adhesives permitted for use with sustained tension applications may be used for all applications (sustained or non-sustained tension). All bar types and hole types marked with "approved" below are approved for use under the conditions stated in the table. All anchorages must be field tested as required by the contract regardless of nominal pullout requirements. Refer to project specifications and plans to determine if the anchors are in sustained tension.

Permitted sustained tension applications are specified in [MnDOT Technical Memorandum 18-11-B-01 \(PDF\)](#).

Those who use any of these products are responsible to handle, store, use, and dispose of excess material in accordance with all manufacturer's and Safety Data Sheet (SDS) recommendations.

For use in sustained tension applications

Product	Manufacturer	Approval expiration	Rebar Designations	Hole type: Hammer-drilled	Hole type: Core-drilled
AC200+	DEWALT	3/15/2024	Approved for Rebar Designations #4 through #10	Approved	Not approved
Pure 50+	DEWALT	5/12/2024	Approved for Rebar Designations #4 through #10	Approved	Not approved
Pure 110+	DEWALT	5/12/2024	Approved for Rebar Designations #4 through #10	Approved	Not approved

Prohibited from use in sustained tension applications

Product	Manufacturer	Approval expiration	Rebar Designations	Hole type: Hammer-drilled	Hole type: Core-drilled
AC100+ Gold	DEWALT	3/15/2024	Approved for Rebar Designations #4 through #9	Approved	Not approved

Guidance

- [Qualification process \(PDF\)](#)

Concrete anchorages

- [Reinforcing bar applications](#)
- [Threaded rod applications](#)

Contact

- [Joe Black](#)
Bridge Office
651-366-4485

All information submitted as part of the application process will be considered public data. Do not submit trade secret information.

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Concrete anchorages - threaded rod applications

Products listed in the following table are approved for use on MnDOT projects unless otherwise indicated. Products prohibited from use in sustained tension applications may be used for applications which are not considered to carry sustained tension loads. Adhesives permitted for use with sustained tension applications may be used for all applications (sustained or non-sustained tension). All bar types and hole types marked with "approved" below are approved for use under the conditions stated in the table. All anchorages must be field tested as required by the contract regardless of nominal pullout requirements. Refer to project specifications and plans to determine if the anchors are in sustained tension.

Permitted sustained tension applications are specified in [MnDOT Technical Memorandum 18-11-B-01 \(PDF\)](#).

Those who use any of these products are responsible to handle, store, use, and dispose of excess material in accordance with all manufacturer's and Safety Data Sheet (SDS) recommendations.

Min. uncracked characteristic bond strength of 1 KSI and min. cracked characteristic bond strength of 0.5

For use in sustained tension applications

Product	Manufacturer	Approval expiration	Threaded rod diameters	Hole type: Hammer-drilled	Hole type: Core-drilled
Pure 50+	DEWALT	5/12/2024	Approved for 1/2", 5/8", 3/4", 7/8", 1", 1 1/4"	Approved	Not approved

Prohibited from use in sustained tension applications

Product	Manufacturer	Approval expiration	Threaded rod diameters	Hole type: Hammer-drilled	Hole type: Core-drilled
AC100+ Gold	DEWALT	3/15/2024	Approved for 1/2", 5/8", 3/4", 7/8", 1"; not approved for 1 1/4"	Approved	Not approved

Min. uncracked characteristic bond strength of 1.5 KSI and min. cracked characteristic bond strength of 0.75

For use in sustained tension applications

Product	Manufacturer	Approval expiration	Threaded rod diameters	Hole type: Hammer-drilled	Hole type: Core-drilled
AC200+	DEWALT	3/15/2024	Approved for 1/2", 5/8", 3/4", 7/8", 1", 1 1/4"	Approved	Not approved
Pure 110+	DEWALT	5/12/2024	Approved for 1/2", 5/8", 3/4", 7/8", 1", 1 1/4"	Approved	Not approved

Prohibited from use in sustained tension applications

Product	Manufacturer	Approval expiration	Threaded rod diameters	Hole type: Hammer-drilled	Hole type: Core-drilled
Pure 50+	DEWALT	5/12/2024	Approved for 1/2", 5/8"; not approved for 3/4", 7/8", 1", 1 1/4"	Approved	Not approved