

Illinois Department of Transportation  
Bureau of Materials  
[Qualified Product List](#)  
**HIGH FRICTION SURFACE TREATMENT**  
**May 12, 2023**

**This list supersedes the September 16, 2022 list.**  
Special Provision for High Friction Surface Treatment (BMPR/BSE) (Effective: January 1, 2016)

**Material Code No. 21639**

**The materials on this list can be used on any  
contract containing the  
Special Provision for High Friction Surface Treatment (BMPR/BSE).**

For information regarding new product submittal, click the "New Submittal" bookmark to the left.

Part A – Epoxy Resin Binder\*

\*An epoxy resin binder from Part A shall be used with a calcined bauxite aggregate from Part B.

Cornerstone Construction Material, LLC  
1150 SE Hamblen Road  
Lee's Summit, MO 64063  
816-380-1082  
Attn: Mr. Scott Bain  
[www.ccmaterial.com](http://www.ccmaterial.com)  
**"FASTRAC CE330 EPOXY BINDER"**  
DESC1: CC-C330

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Terrazzo & Marble Supply Companies  
77 South Wheeling Road  
Wheeling, IL 60090  
773-259-1271  
Attn: Mr. Tom Mikrut  
[www.tmsupply.com](http://www.tmsupply.com)  
**"TERROXY BINDER RESIN"**  
DESC1: TMS-TBR

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Part B – Calcined Bauxite Aggregate\*

\* An epoxy resin binder from Part A shall be used with a calcined bauxite aggregate from Part B.

FX Minerals, Inc.  
257 Kennedy Park Marina Road  
Newell, WV 26050  
Attn: Mr. John Koprevich  
Phone: 814-360-9040

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Great Lakes Minerals, LLC  
1200 Port Road  
Wurtland, KY 41144  
Attn: Ms. Georgia Eusner  
Phone: 703-989-4861

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Mineral Manufacturing Corp.  
10627 Hartslog Valley Road  
Huntingdon, PA 16652  
Attn: Mr. Tom Reed Jr.  
Phone: 814-599-0316

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List of conditionally approved applicators

ACC West Coast, Inc.  
2990 Bay Vista Court  
Benicia, California 94510  
Phone: 707-742-6456  
707-310-0225  
Attn: Mr. Cliff Barber  
P/S Number: 6905-01

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DeAngelo Contracting Services (DCS)  
100 North Conahan Drive  
Hazleton, Pennsylvania 18201  
Phone: 570-580-9100 (o)  
570-790-6051 (c)  
Attn: Mr. Mike Lindsay  
P/S Number: 7300-01

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Venture Construction  
42 Locke Road  
Concord, New Hampshire 03301  
Phone: 314-420-8803  
Attn: Mr. Eric Toman  
P/S Number: 6907-01

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**Part A – Epoxy Resin Binder**  
**Submittal for Review and Approval**

**A. Scope**

The following guidelines are provided to clarify the submittal requirements and expedite the review process for approving epoxy resin binder according to the current Special Provision for High Friction Surface Treatment (BMPR/BSE).

**B. Procedure**

When submitting an epoxy resin binder to the Department, the following shall be included.

- Manufacturer Name;
- The specific product brand name;
- Epoxy resin binder sample – 0.125 gal (0.5 L) sample of each component;
- Independent laboratory test results showing the product meets Department specifications:

Property	Test Method	Requirements
Viscosity, Poises	ASTM D 2556	7 - 30
Ultimate Tensile Strength, psi	AASHTO M 235	2,500 - 5,000
Compressive Strength, psi	ASTM C 579	1,000 min. (3 hours) 5,000 min. (7 days)
Gel Time, minutes	AASHTO M 235	10 min.
Water Absorption, %	AASHTO M 235	1 max.
Durometer Hardness (Shore D)	ASTM D 2240	60 - 80
Cure Rate (Dry through time), hours	ASTM D 1640, 55 mil wet thickness @ 75 °F	3 max.
Elongation at Break Point, %	AASHTO M 235	30 - 70
Mixing Ratio	Provide manufacturer's recommendations a minimum of 60 days prior to construction.	Per Manufacturer
Adhesion Strength, psi @ 24 hrs	ASTM D 7234	250 min. or 100% substrate failure
Infrared Spectrum	AASHTO T 237	Note 1

- Safety Data Sheet;
- Technical Data Sheet;
- A signed letter stating the subject material will not be changed without written notification to the Department;
- Contact person's name, title, address, email address, and phone number; and
- Acknowledgement by Company (see the third page of this document). **If your company does not already have a product included on an IDOT QPL, please submit a signed copy of the company acknowledgement form with your product submittal.**

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**Material Code No. 21639**

**Part A – Epoxy Resin Binder**  
**Submittal for Review and Approval, continued**

The sample and submittal information shall be sent to:

Melinda Winkelman  
Illinois Department of Transportation  
Bureau of Materials  
126 East Ash Street  
Springfield, IL 62704-4766

The manufacturer/producer/supplier will be notified upon completion of the Department's review. For questions regarding the review and approval process, contact Melinda Winkelman at 217-782-0117.

**C. Recertification**

Annual recertification of epoxy resin binder is required. During the last quarter of the calendar year, a recertification letter will be sent to the manufacturer. The recertification paperwork is due January of the following year. For example, the recertification letter is mailed late November 2022 and due by mid-January 2023. New independent laboratory test results will be due every even number calendar year. For example, new test reports will be due in January 2024.

In addition to the annual recertification, any changes in formulation of the epoxy resin binder outside the manufacturer's original parameters will necessitate new submittal of independent laboratory test results.

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**Part B – Calcined Bauxite Aggregate  
 Submittal for Review and Approval**

**A. Scope**

The following guidelines are provided to clarify the submittal requirements and expedite the review process for approving calcined bauxite aggregate according to the current Special Provision for High Friction Surface Treatment (BMPR/BSE).

**B. Procedure**

When submitting a calcined bauxite aggregate to the Department, the following shall be included.

- Producer/Supplier Name;
- The specific material name;
- Independent laboratory test results showing the product meets Department specifications;

Property	Test Method	Requirements
Gradation <u>Sieve Designation</u> No. 4 (4.75 mm) No. 6 (3.35 mm) No. 16 (1.18 mm)	AASHTO T 27	<u>Percent Passing (min.)</u> 100 95.0-100.0 0.0-5.0
Moisture Content, %	AASHTO T 255	0.2 max.
Aluminum Oxide, %	ASTM C 25	87 min.
LA Abrasion Test, %	AASHTO T 96, (D grading)	20 max.

- Calcined bauxite aggregate sample – two 40-lb (18-kg) bags;
- Safety Data Sheet;
- Technical Data Sheet;
- A signed letter stating the source of origin will not be changed without written notification to the Department;
- Contact person's name, title, address, email address, and phone number; and
- Acknowledgement by Company (see page 8 of this document). **If your company does not already have a product included on an IDOT QPL, please submit a signed copy of the company acknowledgement form with your product submittal.**

The sample and submittal information shall be sent to:

Melinda Winkelman  
 Illinois Department of Transportation  
 Bureau of Materials  
 126 East Ash Street  
 Springfield, IL 62704-4766

The manufacturer/producer/supplier will be notified upon completion of the Department's review. For questions regarding the review and approval process, contact Melinda Winkelman at 217-782-0117.

**C. Recertification**

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Annual recertification of calcined bauxite aggregates is required. During the last quarter of the calendar year, a recertification letter will be sent to the producer/supplier. The recertification paperwork is due January of the following year. For example, the recertification letter is mailed late November 2022 and due by mid-January 2023. New independent laboratory test results will be due every even number calendar year. For example, new test reports will be due in January 2024.

In addition to the annual recertification, any changes in the source of origin will necessitate new submittal of independent laboratory test results.

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**Instructions for Acknowledgement by Company:**

The owner, partner, or corporate officer shall complete the following and return a signed and dated copy with the product submittal or recertification.

\_\_\_\_\_ desires to obtain advance approval of materials to be  
(Insert name of company)  
supplied to Department of Transportation contractors as more fully described herein. I  
and \_\_\_\_\_ understand that the Department of Transportation  
(Insert name of company)  
reserves the right in its contracts to approve materials at the source of supply as  
provided in Article 106.01 of the Standard Specifications for Road and Bridge  
Construction. I and \_\_\_\_\_ further understand that approval of  
(Insert name of company)  
company supplied material pursuant to this request does not constitute a contract to  
supply material to the State of Illinois or any of its contractors, and that the Department  
of Transportation does not assure or guarantee that any materials approved hereunder  
will be supplied to the State or any of its contractors. In consideration of approval, I and  
\_\_\_\_\_ agree to the terms, conditions and performance  
(Insert name of company)  
standards of the Standard Specifications for Road and Bridge Construction.

Type of Company:     Individual     Partnership     Corporation

Company Name \_\_\_\_\_

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Business Address \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_

Date of Signature \_\_\_\_\_

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**Conditionally Approved Applicators for HFST  
Submittal for Review and Conditional Approval**

**A. Scope**

The following guidelines are provided to clarify the submittal requirements and expedite the review process for a contractor to obtain conditional approval to apply high friction surface treatment (HFST) according to the current Special Provision for High Friction Surface Treatment (BMPR/BSE).

**B. Procedure**

When applying for conditional approval, a contractor shall submit the following:

- Contractor's legal operating company name,
- Contact person's name, title, address, email address, and phone number,
- A signed and dated letter stating the equipment is either owned or leased. If the equipment is leased, provide the name and contact information of the equipment owner. The letter shall also include a statement indicating the equipment lease agreement will not be changed without notification to the Department.
- A signed and dated letter stating the equipment complies with the current Special Provision for High Friction Surface Treatment (BMPR/BSE):

“Truck Mounted Application Machine. The HFST application machine shall be an approved self-propelled, fully automated truck mounted application machine capable of continuously applying resin and aggregate at a uniform thickness and rate, respectively, in varying widths of up to 12 ft (3.6 m).

The application machine shall be capable of continuously and thoroughly mixing epoxy resin binder components to the ratio recommended by the epoxy resin manufacturer. The epoxy resin shall be uniformly applied to the pavement surface at a minimum coverage rate of 10 gal/min (38 L/min) with a minimum uniform application thickness of 50 mils (1.25 mm).

The aggregate shall be applied by the same application machine which includes an aggregate drop spreader capable of mechanically continuously spreading bauxite aggregate at a minimum rate of 11 lb/sq yd (6 kg/sq m), with a minimum height from spreader to pavement surface of 12 in. (300 mm) to achieve proper spread of aggregate. The use of chip spreaders, vehicle tires, rollers, vibratory compactors or devices that throw loose aggregate onto any part of the live roadway lanes will not be allowed to apply the aggregate onto the wet uncured resin.

The HFST application machine shall be capable of the uniform application of the binder and aggregate at a minimum continuous application rate of 2,300 sq yd/hour (1,925 sq m/hour).”

- A color photograph of the application equipment, and
- Documentation showing HFST or equivalent experience on at least three projects with similar state highway agencies.

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The submittal information shall be sent to:

Melinda Winkelman  
Illinois Department of Transportation  
Bureau of Materials  
126 East Ash Street  
Springfield, IL 62704-4766

The contractor will be notified upon completion of the Department's review. For questions regarding the review process, contact Melinda Winkelman at 217-782-0117.

**C. Recertification**

Annual recertification of conditionally approved applicators is required. During the last quarter of the calendar year, a recertification letter will be sent to the contractor. The recertification paperwork is due January of the following year. For example, the recertification letter is mailed late November 2022 and due by mid-January 2023.

In addition to the annual recertification, any changes in equipment will necessitate a new submittal.