COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3494-12

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 701.02.02.00

FOR INTERNAL CDOT USE

Material code description full name: Fly Ash, Class F

PART 1

Product name: Boral Micron 3

Product category: Concrete\Pozzolan\Class F

Product representative (name & address):
Attn: Melissa Garcia
Boral Material Technologies, Inc.
45 N.E. Loop 410, Suite 700
San Antonio, TX 78216
Phone: (210) 241-1595 FAX: (210) 349-8512

Manufacturer (name & address):
Attn: Melissa Garcia
Boral Material Technologies, Inc.
45 N.E. Loop 410, Suite 700
San Antonio, TX 78216
Phone: (210) 349-4069 FAX: (210) 349-8512

Web-site address: www.boralmti.com

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Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
Boral Micron 3 is an ultra fine fly ash conforming to ASTM C 618 and AASHTO M 295 Class F requirements. It is a refined pozzolan and manufactured at our Rockdale Plant near Rockdale, TX. The material is classified to a smaller particle size than expected for fly ash. The average particle size passing the 3.25 micron size is 50%. The average particle size passing the 8.5 micron size is 90%. It is manufactured for the purpose of usage in concrete requiring greater than 8,000 psi at 28 days or less than 1,000 coulumbs at 56 days. It may be used to increase concrete durability. It can reduce concrete permeability. It can increase electrical resistivity. It can reduce the potential for ASR.

Restrictions, (installation and/or use):
A minimum of 5% of cement replacement is required for use of this product.

Use of the product, (be specific to CDOT highway activities only):
Bridge decks exposed to de-icing salts, marine structures exposed to chlorides, high strength columns or beams requiring extremely impermeable properties.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
May be used as an alternative to silica fume. Provides an impermeable concrete and a durable concrete, therefore having the ability to extend the life of service of the concrete.

Specifications, (listing those applicable is required) **& Certificate of Compliance** (required to certify compliance with listed specifications):

- [x] CDOT : Standard Specifications 701.02
- [x] ASTM : C 618-12
- [x] AASHTO : M 295-11, M 321-04
- [ ] FHWA :
- [ ] other :

Product testing, (from national/independent laboratories or universities) **& Certified Test Report** (CTR required to validate all claims):

- [ ] NTPEP-AASHTO :
- [ ] FHWA :
- [x] other : Boral Industries Laboratory (Internal) (10-17-2011, 11-08-11, 11-29-11, 1-03-12, 1-24-12, 3-13-12, 4-04-12)
- [ ] other :

State DOT Approvals, (current documentation required):
Florida, Georgia, Nevada, Oregon, Tennessee, Texas

Sample submitted: [ ] yes [x] no [ ] n/a | Materials Safety Data Sheets (MSDS): [x] yes [ ] no [ ] n/a

Notes/Additional Comments
Sample can be submitted at no cost to CDOT.