COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2610-12

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

Material code: 712.10.02.00

FOR INTERNAL CDOT USE

Material code description full name: Adhesive, Concrete Anchoring Agent

PART 1

Product name: ET-HP

Product category: Adhesive\Anchoring, Lateral\Epoxy

Product representative (name & address):
Attn: Wendy Allen
Simpson Strong-Tie Anchor Systems
5151 South Airport Way
Stockton, CA 95206
Phone: (800) 999-5099 FAX: (209) 234-3868

Manufacturer (name & address):
Attn: Wendy Allen
Simpson Strong-Tie Anchor Systems
5151 South Airport Way
Stockton, CA 95206
Phone: (800) 999-5099 FAX: (209) 234-3868

Web-site address: www.strongtie.com

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Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

'ET-HP' Anchoring Adhesive is a two component, 1:1 ratio, high solids, epoxy-based adhesive for use as a high strength, non-shrink anchor grouting material. Tested in accordance with ICBO AC58 and AC60 acceptance criteria for concrete. Full cure time: 72 hrs at 40° F; 24 hrs at 80° F. Generally higher load values than competitive products: Allowable loads (4:1 factor of safety) for 1/2" threaded rod embedded 4-1/4" = 3840 lbs; 5/8" threaded rod embedded 5" deep = 5720 lbs; 3/4" threaded rod embedded 6-3/4" deep = 8865 lbs; 1" threaded rod embedded 9" deep = 11,835 lbs. Bond Strength: 2,030 psi (2 days) & 4,240 psi (14 days). Compressive Yield Strength: 9,174 psi (24 hrs) & 13,390 psi (7 days). Compressive Modulus: 658,200 psi (7 days). ASTM C 881 Type I, II, IV and V, Grade 3, Classes B & C (except gel time). Available in 22 oz. (ET-HP22) and 56 oz. (ET-HP56) side-by-side cartridges which can be used in a manual or pneumatic dispensing tool. Resin and hardener are dispensed and mixed simultaneously through the required mixing nozzle.

Prior to May 18, 2012 it was referred to as ET Epoxy-Tie.

Restrictions, (installation and/or use):
Application: >= 40° F.

Use of the product, (be specific to CDOT highway activities only):
Use for anchoring of threaded rod or rebar dowelling in concrete or masonry base materials. Application: >= 40° F.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
High strength anchoring adhesive that is also very economical. Ideal for applications where high volume and low costs are a concern. 56- ounce pneumatic system can out-perform most bulk dispensing systems; reducing labor and equipment costs on the job site. Good in-service temperature sensitivity performance. Can be installed in dry, damp, or water-filled holes with no reduction in performance. Holes can be oversized by up to 150% without reduction in load value. No load reduction in core drilled holes. Can achieve high load values at relatively shallow embedments.

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

- ☐ CDOT :
- ☒ ASTM : C 881 Type I, II, IV and V, Grade 3, Classes B & C (except gel time)
- ☐ AASHTO :
- ☐ FHWA :
- ☐ other :

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

- ☐ NTPEP-AASHTO :
- ☐ FHWA :
- ☒ other : Nelson Testing Laboratories (9-13-2011)
- ☒ other : Wiss, Janney, Elstner Associates, Inc. (9-20-2011)

State DOT Approvals, (current documentation required):

Sample submitted: ☒ yes ☐ no ☐ n/a

Materials Safety Data Sheets (MSDS): ☒ yes ☐ no ☐ n/a

Notes/Additional Comments

State DOT Approvals: Not provided-AK, AZ, CT, FL, MI, NV, NM, OR, TX, UT, WA. [http://www.strongtie.com/products/anchorsystems/technicalinfo/dot_approvals.html.]

Local representative is available for engineering questions and job site product demonstrations. Samples have been provided as requested. Contact local representative for additional product information: Wendy Allen 415-559-9038