COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3239-10

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

Material code: 708.08.01.00

FOR INTERNAL CDOT USE

Material code description full name: Paint, Structural Concrete Coating

PART 1

Product name: TPS II	Product category: Paint/Coating\Concrete Corrosion Inhibitor\NA
Product representative (name & address): Attn: John Lee Surtreat Holding LLC 741 Eagle St. Aurora, CO 80012 Phone: (720) 290-3559 FAX:	Manufacturer (name & address): Attn: Surtreat Holding LLC 437 Grant St. / 1210 Frick Building Pittsburgh, PA 15219 Phone: (412) 281-1202 FAX: (412) 281-1282
Web-site address: www.surtreat.com	Web-site address: www.surtreat.com

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

TPS II is a multi-phase, inorganic, surface applied corrosion inhibitor for use on typical (3000-5000 psi), hardened concrete. It will migrate to the rebar level (3 inches) and react on the rebar surface. TPS II performs at both the anodic and cathodic sites. Multi-functional performance ensures better protection against corrosion. This provides reinforcing steel protection from chloride ions and carbonation. Performance is measured by: before and after corrosion rate measurements.

TPS II will also increase concrete strength (compressive, tensile, flexural) and reduce cement porosity. However, no recent CTRs confirm this.
Reductions in water soluble chloride concentrations. However, no recent CTRs confirm this.

Restrictions, (installation and/or use):

Minimum ambient and substrate temperature of 35°F. Temperatures must stay above 32°F for the first 12 hours.

Use of the product, (be specific to CDOT highway activities only):

Inhibit rebar corrosion rates, increase concrete strength and reduce porosity in bridge decks and other CDOT maintained reinforced concrete structures.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

TPS II will extend the life of reinforced concrete infrastructure and reduce maintenance cost by inhibiting rebar corrosion rate and avoiding the occurrence of concrete delamination and spalling. Structures suffering significant symptoms of corrosion that were treated 20 years ago with TPS II are still in service.

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

- ☐ CDOT :
- ☒ ASTM : G-109, C-876, C-672, C-39, C1202, C-900, C-1404, C-418, C-666
- ☒ AASHTO : T-250, T-161, T-7259
- ☐ FHWA :
- ☒ other : KSF-2407, GWT-400, FM-5-522, Galvapulse

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

- ☐ NTPEP-AASHTO :
- ☐ FHWA :
- ☒ other : University of Florida (March 17, 2006)
- ☒ other : Elzly Technology Corporation (August 2007)

State DOT Approvals, (current documentation required):

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

Notes/Additional Comments

TPS II was originally introduced on the market as GPHP and early test data will appear under that name. NASA-KSC Surtreat will supply TPS-II and technical support for a demonstration project with before and after testing. Improvements have been made in the formulation and the application methods over the 20-year product life.