

-4530405 EPOXY JOINTING OF PRECAST SEGMENTS
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Ghulam Mujtaba
352-955-6685

Comment: (9-22-10)

1. Subarticle 453-4.5.2 Last Paragraph: It appears that 24 hour requirement will be changed to 36 hours. There should be a strikethrough on the number “24”.

Response: Change made.

2. 453-4.5.3 Compressive Yield Strength Item No.2: The phrase “for the period of” should be undeleted. It is confusing when mentioning 24 or 48 hours for normal set and 7 or 14 days. Clarify that for what condition it will be 24 and when it should be 48 hours. Similarly, specify that when it will be 7 and under which condition it will be 14 days.

Response: Section has been clarified to better state the time requirements.

Duane Brautigam

Comments: (9-23-10)

1. Lead in sentence should read “SUBARTICLE 453-4.5 (of the Supplemental Specifications)....”

Response: From the Specifications Office: This will be corrected. Change made.

1. In the heading for 453-4.5.2, the work “open” should be capitalized. (Contract Time (Open Time) and Contact Strength”.

Response: From the Specifications Office: This will be corrected. Change made.

Ken Zinck
386-740-3471
ken.zinck@dot.state.fl.us

Comments: (10-21-10)

For the new 36-hour additional test specimen, shouldn't there also be a target PSI at 36 hours, in conjunction with the exhibition of a brittle break for acceptance. Not unless the brittle break is of more significance than the PSI.

Response: A target PSI is not required. Only a brittle break is required which indicates the slow set epoxy is no longer pliable or that it might continue to act as a lubricant. No changes made.

Robert Forlong
Pilgrim

Comments: (10-12-10)

I have reviewed proposed changes to Section 453 Segmental Epoxy.

I understand and agree with all sections with the exception of **453-4.5.4 Bond Strength**.
Bond Strength shall be:

Normal Set epoxy.....1000 psi at 48 hrs.

Slow Set Epoxy.....10000 psi at 14 day.

Test cylinder shall have a compressive strength at least 6000 psi.

Agree with above.

Prepare as defined in 453-4.5.2--

453-4.5.2 states curing specimens at highest temperature of the formulation temperature range.
Delay joining of specimens for Normal Set-60 min. and for Slow Set 6 hours.

We have always performed Bond Strength as follows:

Prepare cylinders as described in ASTM C882.

The specimens shall be soaked in water which is at the minimum temperature of the application temperature range for the formulation being tested for at least 24 hours.

Upon being removed from the water, the sloped surfaces shall be dried with an absorbent cloth for a period of ten minutes. Immediately after completion of the drying operation, both faces of the sloped surface shall be coated with an approx. 1/8" thick layer of the mixed epoxy.

The sloped surfaces shall be joined together by setting one specimen upon the other and shall be cured until immediately before testing at the minimum temperature of the application range for the formulation being tested.

Contact Time is performed at the high temperature of the application temperature range to and Bond Strength should be performed at the low temperature of the application temperature range.

Response: Agree. Section has been revised to require testing at the minimum temperature of the formulation range.
