# Specification Section 413 Subarticle 413-3

#### **ORIGINATION**

Date: 5-8-2025 Name: Ron Simmons Email: Ronald.Simmons@dot.state.fl.us

## **COMMENTARY**

Monomer shelf life limit definition is not clear and the excessive properties requirements of the materials.

## **INDUSTRY COMMENTS AND RESPONSES**

(Please note all comments and responses are verbatim as received. The Specifications Office does not alter typos or grammar.)

BLACK = Comment **BLUE** = Specifications Response **GREEN** = Change Made to Specification

## Name: John Fauth

#### Date: 5-29-2025

COMMENT: Methacrylate systems were designed for application during daylight hours, where higher temperatures and sunlight exposure would improve curing and tack free times. FDOT transition to nighttime work has changed the work environment, resulting in lower temperatures and no sun exposure during application and curing. In addition, methacrylate cure is further delayed by oxygen exposure. In other areas suppliers are allowed to use ~1% in the formulation which provides an adequate oxygen barrier while not detracting from skid resistance. Finally, FDOT does not allow for general use of accelerators to speed methacrylate cure. The change in work/application environment along with formulation restrictions is restricting contractor overnight work hours to ensure on-time lane opening, which increases FDOT project costs. I would strongly recommend a thorough review of these issues and would be pleased to participate in any conversations/meetings.

## **RESPONSE:**

Further discussion with the commentor is welcome. It is unclear what is allowed to be used in other areas to provide an oxygen barrier. Table 413-2 provides requirements for various time events (tack free, surface cure, etc.) Section 413-3.1 requires the methacrylate manufacturer to have an on-site representative with experience (minimum 10 previous projects) in the formulation and application of methacrylate. If environmental conditions are such that these times cannot be achieved, there is nothing prohibiting the methacrylate manufacturer's representative from recommending the use of an accelerator to speed up the curing process to meet the specification requirements.

#### **ACTION TAKEN:**

No action taken at this time.

#### Date: 6-2-2025

COMMENT: Approve the 3 proposed changes to 413.2 Propose a change to 413.2. Section specifying fluorescent dye if a bridge deck has been previously sealed with methacrylate. Change to: Before deck is sealed, one or two sections of bridge deck containing methacrylate with fluorescent dye shall be applied to deck. After curing, cores shall be taken to verify the dyed methacrylate has been effective in sealing the cracks. If effective, proceed with sealing entire deck with standard methacrylate which does not contain fluorescent dye.

#### **RESPONSE:**

This comment will be considered further during the next revision cycle. It is assumed this suggestion is made as a cost savings measure, however, initial thoughts are this would lead to project delays if a couple of sections had to be sealed and then cored after curing to verify effectiveness before proceeding with sealing the entire project.

## **ACTION TAKEN:**

No action taken at this time.