

Notes

Deck Sealer Peer Exchange Session

NEBPP Conference

23 August 2023

Chair – Tripp

Notes – Ronnie Medlock

Question – for owners

- DelDOT – for new – seal the entire surface with silane; also contingency for methacrylate because decks are cracking; looking at cure times; asks what other states do
- NYS DOT – similar – silane – four to five year cycle
- MDSHA – for brand new bridges, put linseed oil down
- Mass – not sealing their decks; would like to learn
- Parks – ramping up program; trying to learn what others do; attendant not sure about what they've done in the past
- CT – asphalt overlay state; haven't not used sealers
- NYC – follow NYS practice

Kevin (DelDOT)'s question – Perfect world, no cracking, but are getting bridge decks cracks, and then they skip the silane and do the methacrylate. What is the penetrating depth of methacrylate. Following answers by Max and Tim

- Silanes – ¼" to ½"; even deeper if methacrylate is put on soon after
- Methacrylate – more of a surface coating – will wear away much faster than silane
- Can you both – the silane will help the methacrylate bond – it acts like a primer; however, if you do the reverse, silane will not penetrate the methacrylate
- Epoxy the bridges? Indiana used to do this
- What percent silane? Use 100% - better performance, better depth
- Isobutyl silane – fast to open; water-based – four to five hours; and has to be over 40 degrees

Kevin (DelDOT) - Ideal application type? Getting strength fast, which makes the cracks worse, and contractors are always pushing

- Tim - Go the full 28 days – the drier the better
- Max - Also depends on mix design

Would traffic affect the depth of penetration? Can you put traffic on and seal later?

- Tim, traffic is okay – can put traffic on and seal later

Friction / skid resistance affected?

- No – silane does not affect skid; not a film – becomes part of the concrete

Lynseed oil use?

- MD – not often, but still used
- Mass – is still in their specs too

Delaware had good success with a sprayed on product ()

Are there differences to how we use sealers for new concrete versus as an extender (traditional use)?

- No

What is the preparation?

- Tim – states are different; generally sweep and blow; some power wash, but then you have to wait for the deck to dry; some shot blasting
- Recommend? – Max - shot blast is the best
- Delaware – had been power washing, but not prefer shot blasting; maybe just sweep if the deck is really clean

What about deck washing? Would it help extend the life of the silane?

- Max – slight help. Washing won't break the silane bound. Best practice is indeed to clean chlorides off, but doesn't extend the silane life

Percentages of silane? Is 100 better than 40?

- Tim - Performance depends on the application rate. Application rate has to be set to the percentage – if using a lower percent, then application rate has to be higher. Don't just say, "follow manufacturer's recommendations".
- Max – other issue is that you have to use water-based on the Northeast

Nancy – deck sealer group did a synthesis; got good responses. North Dakota – does silane at construction, then redoes every five year. Washing can be advantageous. Crack sealing is another matter; silanes can help with hairline cracks, but otherwise need methacrylate or other.

How long is methacrylate effective?

- Nancy – doesn't really know – is highly dependent
- Tim – as with paint, you have to do a good surface preparation; if you didn't have a silane under the methacrylate, you didn't extend the

New York – getting significant crack reduction from using E5 internal cure.