

08/05/2018

RE – OIL-PROOFING CONCRETE DENSIFICATION SEALER FOR POLISHED CONCRETE

INTRODUCTION:

1. Product:

Tech-Dry **Lithium Densifier Premium** is a newly developed lithium-based concrete densification sealer which not only provides concrete densification sealing but also imparts strong oil resistance to the polished concrete. A normal lithium densifier was selected as a comparison sealer and an untreated substrate was used as a control.

2. Substrates:

Polished concrete pavers with the following finishes:

- 50 grit resin pad
- 800 grit resin pad
- 70 grit metal pad

3. Application:

The above densifier sealer was applied onto the substrate surface via brush and the surface was kept saturated for 10 minutes before any residual sealer was removed from the surface. The treated substrates were allowed to cure at the atmospheric conditions for 7 days.

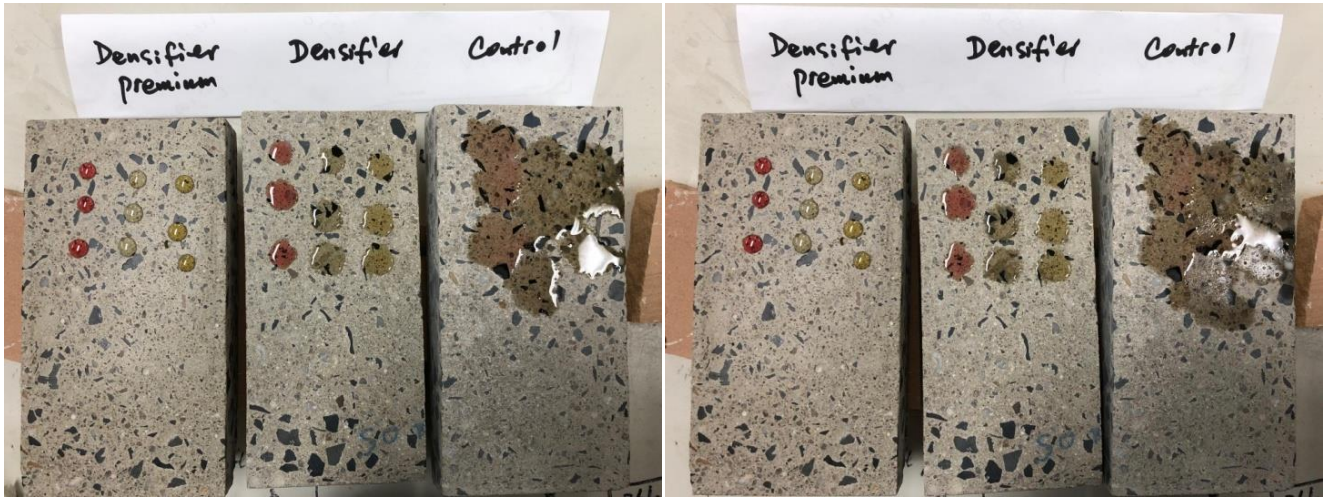
4. Test method:

Olive oil, ordinary engine oil and heavy engine oil were placed as oil droplets on to the treated substrate. The oil droplets were kept on the surface for 24 hours. The oils were removed from the surface with a paper towel at the end of the 24 hours. The oil resistant effect (or oil beading effect) and the oil staining on the surface were visually examined after the oils were removed from the surface. The results are presented in the following photos.

TEST RESULTS:

1. Oil Resistant Effect (Oil Beading)

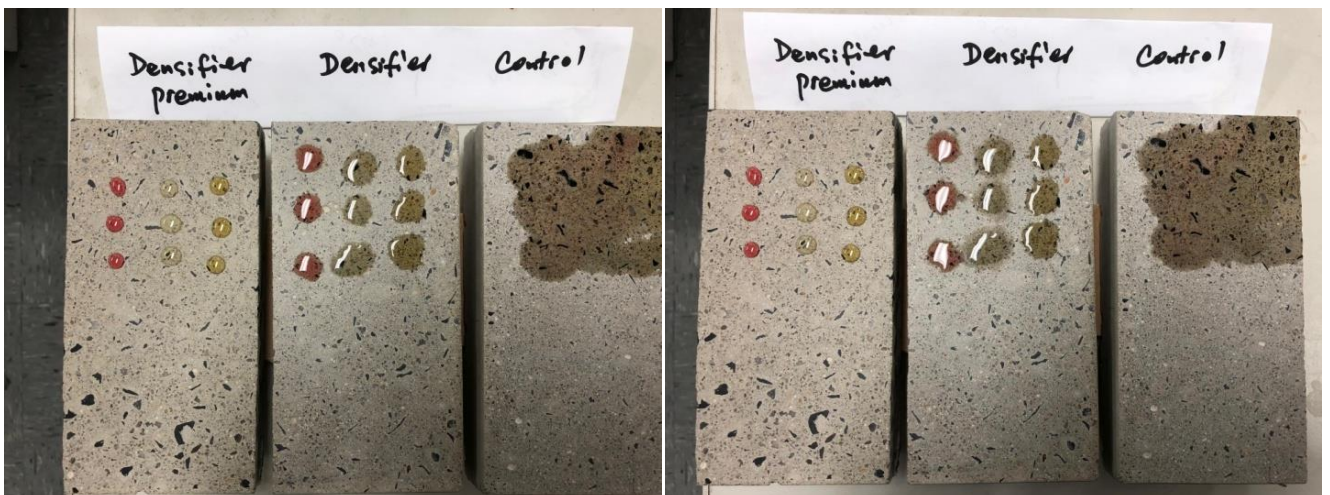
Substrates finished with 50 grit resin pad (left photo: 1 hour and right photo: 24 hours)



Substrate finished with 800 grit resin pad (left photo: 1 hour and right photo: 24 hours)

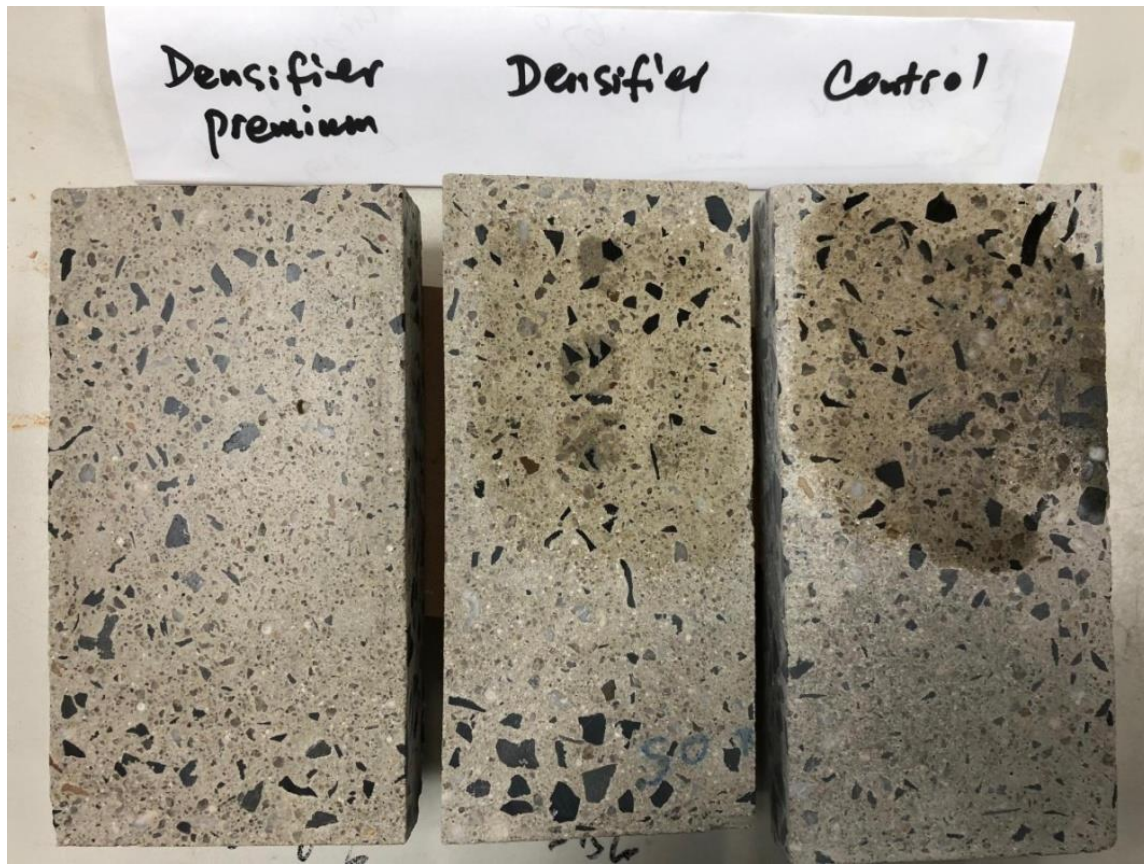


Substrate finished with 70 grit metal pad (left photo: 1 hour and right photo: 24 hours)

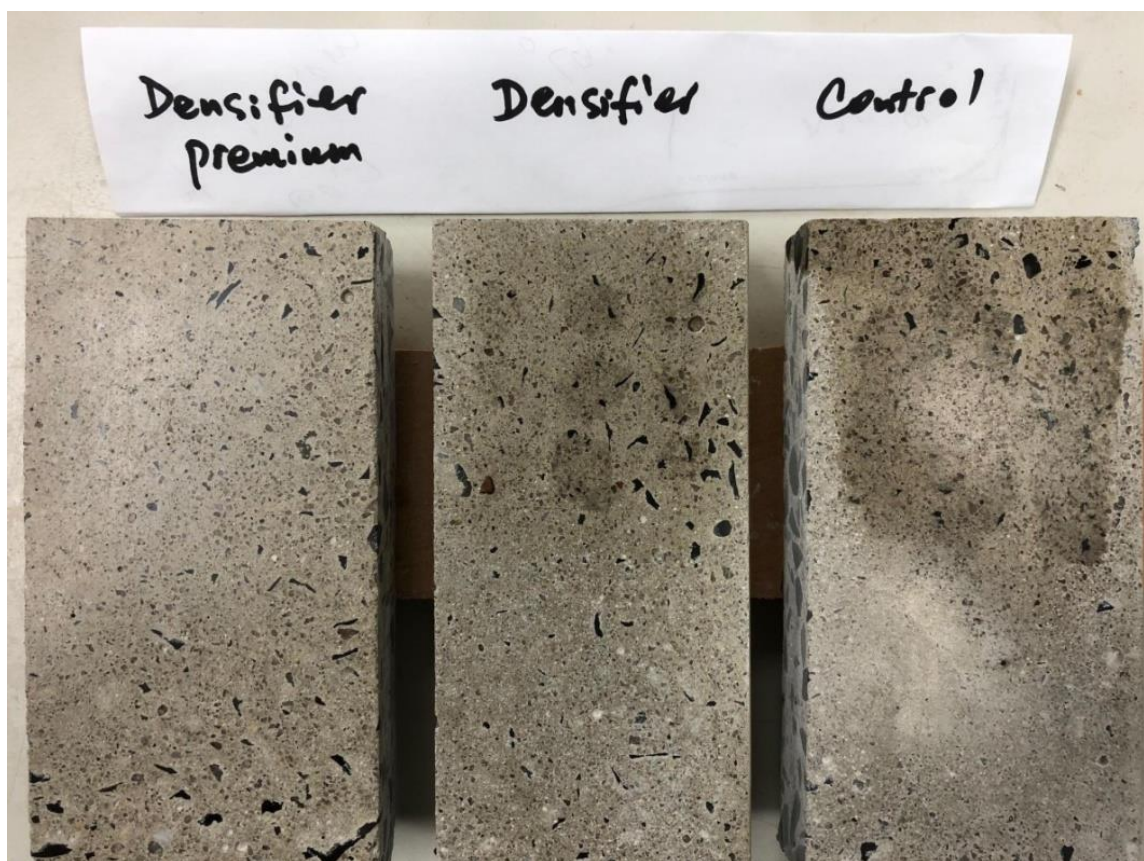


2. Oil Staining (after the oils were removed from surfaces)

Substrate finished with 50 grit resin pad



Substrate finished with 800 grit resin pad



Substrate finished with 70 grit metal pad



CONCLUSION:

Lithium Densifier Premium provided good oil repellent effect (oil beading) to all treated surfaces. The oil droplets remained as good beading for 24 hours and left almost no oil staining after the oil was removed from the surfaces. In contrast, poor oil beading was shown on the substrates treated with the normal lithium densifier, with no oil beading on the untreated surfaces. Heavy oil stains were exhibited on the control substrates and moderate stains were shown on the substrates treated with the normal lithium densifier.

From the above test results, it can be concluded that the above **Lithium Densifier Premium** is considered as oil-proof densification sealer for polished concrete under the above test conditions.

This report is prepared by

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