


*Questions & Answers from Attendees  
of Live Version October 24<sup>th</sup>, 2019*


# Extending Asphalt Pavement Life with Geosynthetic Interlayers





We typically expect a crack to reflect through new asphalt at the rate of 1" per year (2" overlay will show reflective cracking in 2 years). What improvement to this rate can be expected by using GlasPave?

- GlasPave25 3X
- GlasPave50 6X
- GlaseGrid 9X




In terms of the waterproofing, should this then be designed to allow any water to be directed towards the sides of the roadway, and it needs to be picked up there through an appropriate collection mechanism such as a fin drain or French drain?

- Normal road design principals should be used like cambered road design to drain to each side. No special design required for using an interlayer.



Do cracks need to be sealed before the interlayer is placed?

- Yes, cracks  $\frac{1}{4}$ " or larger need to be crack filled




When your product is milled into the material to be used in rap, is there a need for mix design adjustment, due to the material being in the milled material

- You would use the same design when using rap with or without the GlasPave/GlasGrid millings in the RAP. The GlaseGrid/GlasPve millings will have no impact on testing for rutting and moisture suceptability and low temperature cracking




Are GlasGrid and GlasPave detectable by ground penetrating radar?

- It should have no impact on the measurement of the density of the asphalt above the interlayer as long as the nuclear gauge is calibrated for the correct asphalt thickness.



You said there is no need for a tack coat for the TF, but the edges against existing pavement will need tack coat, will the tack coat overspray impact the TF material?

- The tack coat will not impact the GlasGrid TF



When you use GlasPave, where does the water go that it prevents entering the base. Is drainage system needed?

- If the pavement is properly cambered the water will drain to the edge. No special drainage system is needed. Water will also evaporate out of the pavement.





How "dry" is "dry" i.e., what is "dry" defined as for this situation?

- If you can wipe your hand across the pavement and not have any residual moisture on your hand. No free water.




Please define a fine milled surface.

- If you e-mail me [jrasche@tensarcorp.com](mailto:jrasche@tensarcorp.com), I can send a milling technical guideline.




What is the price per square foot for both GlasGrid and GlasPave?

- GlasPave 25 - \$0.35 sf - \$0.40 sf
- GlasPave 50 - \$0.60 sf - \$0.70 sf
- GlasGrid - \$0.70-\$0.80 sf
- Installed pricing including material, tack and installation
- The size of the job and project logistics will effect costs.




How does the waterproofing effect work in areas with significant freeze-thaw cycles where moisture could get trapped in cracks in the top section of asphalt on top of the interlayer and then go through freeze-thaw.

- With proper compaction and density the water expands upward when frozen. We do not see this as a problem on past installations with properly installed interlayers and coated glass products.



Does the interlayer have to be placed over the entire area for effective reflective crack mitigation? I have seen glass grid used over existing cracks only under an overlay where reflective cracking did not come through where the original cracks were, but cracking occurred in the overlay at the approximate locations where the glass grid sections ended.

- It depends on the severity of the cracking. The severity of the cracking needs to be evaluated to determine the proper width of the interlayer. It is common to see two cracks develop where the width of the interlayer was not great enough to dissipate the crack energies.



You mentioned that the product prevents water getting into the base layer, but does it also keep water within the cracks?

- Water will remain in cracks until it dissipates or evaporates.



Is there a minimum overlay thickness required to be on top of the products?


- Minimum of 1½" of compacted asphalt.



What is a PHFT mat? Do you recommend Glasgrid installation on a milled surface as shown on slide #52?

- (PHTF) Precoated High Tensile Fiberglass
- GlasGrid cannot be installed on a milled surface. It must be installed on a leveling course. GlasPave can be installed on a milled surface.






Can installation spreader bar assembly be purchased in western Canada for both products and rolls sizes?

- Yes, GACO manufactures installation equipment
- (619) 222-5111
- [GACCO@outlook.com](mailto:GACCO@outlook.com)
- [www.gacco.com](http://www.gacco.com)



Does GlasGrid work with warm mix asphalt?

- Yes it does. GlasGrid TF does not work with warm mix.




What is the maximum temperature of the leveling course before a GlasGrid can be installed?

- Pavements should be between 70° F and 140° F.
- Pavements less than 24 hours old should be between 70° F and 110° F.




Does one material work better than others on porous paving?

- GlasGrid would work better on porous pavements given it has an an open grid structure.




How difficult is it to add an interlayer and cut it around manholes, handholes, water valves, etc.?

- It is very easy to cut using a utility knife.




Where is the dividing line between using this product to prevent future reflective cracking versus having to complete full depth patching?

- If there is a base concern it must be addressed. You cannot fix base issues from top down. Base issues are defined as having greater than  $\frac{3}{4}$ " rutting or fines pumping. This is an indication of base issues.



Which aspects should be considered to rehabilitate asphalt pavements with cracks originated by expansive - contractive soils? Is there some recommendations based in an expansion pressure?

- By installing a waterproofing interlayer you are able to keep moisture out of the base thus reducing the effects on expansive soils



Please explain the strain compatibility of interlayer and surrounding asphalt, the preferred/optimal location for interlayer, and can more than 1 interlayer be used. If yes, please discuss locations


- The interlayer has a higher modulus than the asphalt which allows it to overcome the strain weakness of asphalt.
- Yes, more than one interlayer can be used. You want to install the interlay as low as possible in the section. You can achieve the maximum traffic capacity at 4 inches.





GlasGrid is essentially worth 0.17" of HMA in evaluating rehabilitation options for our distressed streets, correct?

- GlasGrid has the capability to be equal to 2" of asphalt assuming that the asphalt is the critical layer and the interlayer is in the tension zone.




What is the recommended cure time for leveling course before laying GlasGrid?  
Also, do the 5' GlasGrid rolls need an overlap as they are installed on the street?

- If the leveling course is less than 24 hours old it needs to cure to a temperature of 110° . It is best to let the leveling course cure overnight.
- GlasGrid should be overlapped 1"-2" on longitudinal joints. Transverse joints should be overlapped 3"-6".




What about top-down cracking, can you please elaborate?

- The interlayer is overcoming the weakness of the asphalt. It doesn't matter if is top down or bottom up cracking.



I believe that water is trapped in an upper AC layer on the glassfiber interlayer.  
Do you think that it can accelerate water damage in an upper layer?

- If the asphalt is properly compacted and achieves the proper density this should not be an issue.



If you double the ESALs 43,000 to 83,000 by using the fiberglass and you can eliminate 1 inch of asphalt why isn't every DOT doing it? ConnDOT mills and overlays same roads seems like every 5 years. Batching plant's \$ must have influence over DOT.

- Great point. We do not advocate reducing asphalt structure. Our products enhance the performance of asphalt overlays.