

COMPACTION OF ECR-RUBBERIZED ASPHALT PAVEMENTS

Following paver mix placement, several operational practices should be followed during compaction:

1. Rubber in asphalt is a dynamic product when the mat temperature is over 270 F, as the rubber grains are still expanding in the binder. Expanding rubber can reduce the efficiency of compaction efforts, and the mix will tend to be “tender” at those elevated temperatures. We recommend that breakdown compaction delays initial compaction efforts until the mat temperature is below 270 F.
2. In general, breakdown compaction can begin with mat temperatures below 270 F. In order to maintain roller cost-efficiencies, finish compaction should be completed while the mat temperature is above 180 F.
3. Elastiko^R ECR mixes do not tend to be sticky like standard rubberized mixes, but like most asphalt mixes, they do require normal roller drum lubrication across the roller surface in order to avoid any mix pickup during breakdown compaction.

When compacting open-graded and SMA mix designs with higher binder contents, users may note a reduction in the passes necessary to achieve full compaction. ECR SMA mixes have required up to 25% fewer passes for breakdown compaction, although the number may vary somewhat based on mix design specifics.

In a wide range of mix designs, including hundreds of both dense and open graded mixes, contractors are reporting compaction specification compliance without any systematic issues.



Figure 1: Compaction on I-88, Fall, 2015

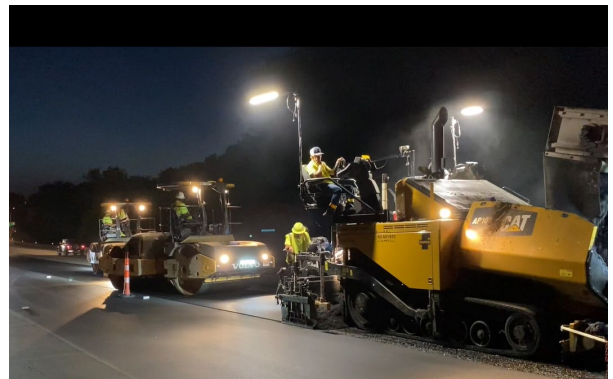


Figure 2: Night paving Operations, Columbia, MO 2022