



Paving Materials & Products

Tire-derived material is utilized for its beneficial properties in asphalt to produce rubberized binders. These rubberized binders are manufactured through either field blending or terminal blending processes which are then used in various applications such as hot mix asphalt (HMA), chip seals, stress absorbing membrane interlayers (SAMI) and slurry seals that provide cost-effective and superior performance over applications that utilize conventional asphalt.

Field Blend Asphalt Rubber Binder

In this process, the recycled tire rubber is added to asphalt in field blending operations. The product is called Asphalt Rubber or the “wet process” and has been successfully used in California and other states. It is defined by ASTM D 8, Volume 4.03 as: “A blend of asphalt binder, reclaimed tire rubber, and certain additives in which the rubber component is at least 15 percent by weight of the total blend and has reacted in the hot asphalt binder sufficiently to cause swelling of the rubber particles”.

Terminal Blend Binder

In this process, the recycled tire rubber is added to asphalt at the refinery or at a stationary asphalt terminal. The product is called Terminal Blend and has been used successfully in California and other states. Terminal Blend binders utilize a fine mesh of crumb rubber derived from 100% tire rubber and blended with asphalt at high temperatures. The Terminal Blend binder is now using the performance grading (PG) specification system similar to polymer modified binders, and the product can be emulsified.

Binders Benefits may include:

- Fatigue and reflective cracking resistance in hot mixes
- Better chip retention in chip seals
- Increased film thickness
- Higher elastic properties