

Using Waste Tires in “Rubber Roads”

Submitted by Ashley Benson, UNHT² Student Project Assistant

Highway departments all over the country have taken steps to join the global effort to curb waste, recycle and reuse products. Crumb rubber from recycled tires is now being added to pavements, through “thin rubber modified hot mix asphalt (HMA) surface courses or rubber modified spray applications used as pavement interlayers or surface treatments” (Santucci 1). The addition of “crumb rubber”—or small pieces of recycled tires—to pavements, not only reduces tire waste, but has also has produced rubber modified pavements that reduce cracking and pavement noise, and improve safety in wet weather.

There are three basic methods for the addition of reclaimed rubber to pavements: the wet process, the dry process, and the terminal blend process. The dry process is not recommended when modifying asphalt with rubber additives due to poor performance. In the wet process (also called the asphalt rubber process), asphalt is blended with rubber in a specialized blending unit and then applied afterward. The terminal blend process is still a wet process, but is mixed at a refinery or special terminal, not in a blending unit. Terminal blends require less rubber and more finely ground rubber than general wet process blends.

While there are plenty of reasons that highway departments should consider using rubber additives in their pavements, these mixes are not useful in certain situations. Avoid the mixes:

- in weather under 13 degrees Celsius,
- on top of severely cracked pavement,
- where traffic data has not been monitored,
- where large amounts of handwork is required,
- and where mix temperatures drop significantly before placement due to long haul distances.

Despite these constraints, both the terminal blend process and the asphalt rubber process provide cost-effective and environmentally friendly ways of maintaining and preserving our municipal roads.



*Reference: Santucci, Larry. “Rubber Roads: Waste Tires Find a Home.” *Pavement Technology Update*. 1.2 (2009): 1-12. Print.*

Proper Salt Storage: A Reminder



Road managers should consider the benefits of investing in proper salt storage. Salt needs to be covered to prevent water from infiltrating the stock pile. Water contaminated with salt can end up polluting lakes and rivers, costing the town more money for proper clean-up and preparation for drinking water. In addition, a salt storage shed should be large enough to house all the salt needed for the winter. Replenishing your salt supply mid-winter can be risky and will usually cost more, since it would not be a bulk purchase.

*References: Hanneman, Richard L. “Storage Container.” *Roads and Bridges*. February 2008: 54-58. Print.*