

DURAWHISPER™



bringing materials to *life*™



Lafarge Asphalt is committed to being the leading developer and supplier in North America, of innovative asphalt products designed to optimize quality, performance, durability and sustainability. Durawhisper™ utilizes crumb rubber to modify the asphalt cement binder to provide a thin asphalt overlay specifically designed to reduce noise.

Product Overview



Durawhisper™ consists of a 10 mm, nominal size, dense graded asphalt mixture designed with 2 to 4% air voids. The aggregate particle shape and the design of the stone skeleton provide excellent rutting resistance, whilst providing excellent vehicle traffic noise reducing characteristics. Crumb rubber is added to the asphalt mix, which is beneficial for improved durability and long term performance, particularly when subject to heavy slow moving traffic.



The combination of the crumb rubber additive and the use of a polymer modified binder provide increased resistance to reflective cracking initiated when paving overlays to existing concrete slabs.

The traffic noise reducing properties make Durawhisper™ ideal for surfacing in and around subdivisions and general residential areas.

Technical Details

- Durawhisper™ surfacing provides Reduced Tire Noise
- Durawhisper™ provides improved resistance to surface initiated cracking and improved resistance to fatigue and reflection cracking
- Durawhisper™ gives improved rutting resistance
- Durawhisper™ results in reduced life cycle costing and lower pavement maintenance costs

Performance

The operation of the hot mix plant is essentially same as conventional HMA mixes, however the introduction of crumb rubber requires additional, specialised equipment.

Tire Rubber Crumb Asphalt can be added in 2 ways:

1) Wet Process - Asphalt rubber binder contains 15 to 20% tire rubber crumb from processed tires

Asphalt binder and tire rubber crumb are mixed together at elevated temperatures to achieve a homogenous binder

2) Dry Process - 1% to 2% tire rubber crumb is mixed in as a dry aggregate

Durawhisper™ has been subject to rigorous testing regime, providing the following performance results;

- 1) Maximum laboratory wheel rut depth 5 mm after 8000 cycles at standard PGAC high temperature, AASHTO TP 63.
- 2) Minimum fatigue resistance of 230,000 cycles to failure at 480µm and 18°C (AASHTO T321)
- 3) Reduced tire noise by 8 dBA (1.0 m offset x 1.0 m height roadside measurement)



Lafarge's commitment to sustainability

Sustainable construction practices and products represent the future of our industry, and Lafarge is proud to offer the DURAPAVE line of asphalt products that contribute directly to the reduction of greenhouse gas emissions, reduced waste materials in landfills, and extended life spans for aggregate resources.

Last year, Lafarge's asphalt operations across North America recycled nearly 200,000 tonnes of material into new asphalt through our Duraphalt™ and Duracycle™ products. Our proprietary warm-mix technology, Duraclime™, consumes less fossil fuel to produce than conventional hot mix, which means lower carbon dioxide emissions at our plants, and reduced smoke and fumes from the mix on the job site.

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