

DURACYCLE™



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.

Duracycle is a range of branded proprietary hot mix asphalt products which contain enhanced levels of recycled material; using local sources for recycled materials such as Reclaimed Asphalt Pavement (RAP), Asphalt Shingle Modifier (ASM) and crushed glass sand, reduces the demand for primary aggregates and makes a significant contribution to sustainable resource and environmental objectives.

Product Overview

Duracycle™ is based on the knowledge that asphalt for use in road construction is 100% recyclable and the use of RAP (reclaimed asphalt pavement) for recycling has been widespread for 30 years.

Asphalt pavement is the most recycled material in the USA and each year over 100 million tonnes of asphalt pavement is reused or recycled into new pavements.

A major benefit is that virtually all of this recycling happens at the top of the value / end use chain i.e. back into new asphalt material, without detriment or compromise to the quality of the finished product.

Lafarge North America asphalt operations do not just recycle RAP but our mixes utilize 'waste' material from other industries, with roofing shingles, tire rubber, glass and spent rail ballast all being incorporated into new asphalt production reducing total life cycle greenhouse gases by 10%.



Technical Detail

- Duracycle™ can be manufactured to meet all current technical specifications for hot mix asphalt without recycled material
- Duracycle™ can be both a binder and surface course material
- Duracycle™ reduces primary aggregate demand and promotes sustainability
- Proven history of performance
- Produced at modern purpose built asphalt plants, with a very high level of quality control to ensure consistency

Performance

The Superpave mix design method can be applied to mixes containing high percentages of RAP (25%) and ASM (10%). In terms of mechanical performances, results show that the use of RAP and ASM:

- 1) Increase the stiffness at 20°C and 10Hz. This point is very advantageous for pavement design
- 2) Improve the rutting resistance of HMA
- 3) Improve the fatigue resistance of HMA
- 4) Insignificantly affect low-temperature cracking resistance in mixes containing up to 15% RAP and 5% ASM
- 5) Slightly affect moisture resistance. However the TSR values are over 80% (required limit in AASHTO)



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 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.

For more information:

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