

**ABSTRACT****Durability of Roofing-Grade Natural Asphalt  
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The observation that petroleum asphalt durability may be improved by blending with a proportion of Trinidad lake asphalt led to a study of the extent and mechanisms of weathering of various natural asphalt formulations.

A rheological analysis of Trinidad lake asphalt and two Trinidad-based ASTM D-312 Type IV materials was conducted and the results compared to those for a high quality Venezuelan Type IV asphalt. The natural asphalt showed behavior consistent with that normally associated with air blown asphalts. The Trinidad Type IV materials appear to be physically similar to the Venezuelan asphalt.

Accelerated weathering of the Trinidad lake asphalt and the Type IV materials indicated the natural asphalt is quite unsuitable for external use if it is not modified. The simple blending, air blowing and addition of a small percentage of hydrated lime can produce a specification grade roofing material that is reasonably durable.

A range of test methods was also evaluated to determine their suitability for assessing asphalt durability.