

INTERNATIONAL USE OF RUBBERIZED ASPHALT OPEN GRADED FRICTION COURSE

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ABSTRACT

The international use and technology of rubberized asphalt open graded friction course mixes has grown and expanded since it was first introduced in Arizona in the mid 1980's to its present use in not only the United States but also Portugal, Brazil and China. Rubberized asphalt open graded friction courses (RAFC) are placed as the top course wearing surface. Their function is multifaceted and includes providing a wet weather surface with very good friction properties (skid resistance), reduce reflective and fatigue type cracking, smooth riding surface in terms of the international roughness index and a surface that dampens the tire/pavement noise, and reducing emission rates of tire wear. RAFC's are composed of a high quality clean open grade aggregate. The binder content is typically in the range of 9 to 10 percent by weight of the aggregate and placed from 12.5 mm to 25 mm in thickness. The rubberize asphalt binder is composed of typically 80 percent asphalt (bitumen) and 20 percent recycled tire rubber. The objective of this paper is to review and summarize the use of RAFC's in various countries and to report on the technical research findings that have buoyed the use of this unique material.