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## **Abstract**

The issue of discarding unwanted materials is becoming a vital topic in contemporary engineering trends, as it has negative influence in the environment where it's discarded. Polystyrene is one of the materials widely used in industrial applications as a packaging and construction material. The collection and safe disposal of this material in asphalt mixes was elaborated in this paper. The polystyrene waste was added by volume to the bitumen in 0, 5, 10 and 15%. Penetration degree, softening point, ductility, flash and fire point tests were conducted in this research. Results show that increasing the polystyrene ratio in asphalt will have direct impact on the bitumen properties by decreasing penetration, ductility and increasing softening, flash and fire points. The modified asphalt can be used in hot climate for different construction purposes such as insulation materials (waterproof) for basements, retaining walls and roofs or as a pavement material in garage floors, parking lots, sidewalks, playgrounds and parks.