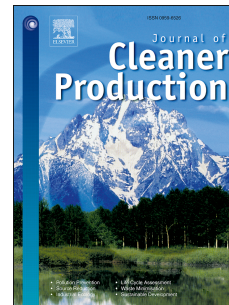


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Review of warm mix rubberized asphalt concrete: Towards a sustainable paving technology

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11 **Abstract:**

12 In recent years, transportation agencies and the general public alike are demanding increased
13 considerations of sustainability in transport infrastructure. Warm mix asphalt (WMA) is developed for
14 reducing energy consumptions and emissions in asphalt paving industry. In addition, the use of
15 rubberized asphalt concrete (RAC) has proven to be economically and environmentally sound and
16 effective in improving the performance of pavements around the world. The combination of WMA
17 and RAC, namely WarmRAC, is a novel and promising paving technology that can realize pavement
18 sustainability from principles to practices. This study summarizes the best practices and recent
19 research findings on warm mix rubberized asphalt concrete, including mix design, construction
20 techniques, performance evaluation, feasibility of recycling, and environmental and economic benefits.
21 Although most research findings to date about WarmRAC are positive, it still has a long way for
22 WarmRAC to be fully adopted worldwide. Therefore, life cycle assessment including environmental
23 and economic impacts, and long-term performance of WarmRAC need further research with
24 involvement of transportation agencies, industry and academia.

25

26 **Keywords:** Warm mix asphalt; Asphalt rubber; Rubberized asphalt concrete; Sustainability; Mix
27 design; Construction

28

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