

## Effect of Using Crumb Rubber with Warm-Mix-Asphalt Additive in Laboratory and Field Aging

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**Abstract :** Using a waste material such as crumb rubber (CR) obtained by waste tires has become an important issue in respect to sustainability. However, the CR modified mixture also requires high manufacture temperature as a polymer modified mixture. For this reason in this study, it is intended to produce a CR modified mixture with warm mix asphalt additives in the same mixture. Asphalt mixtures produced by pure, 10%CR, 10%CR+3% Sasobit and 10%CR+0.7% Evotherm were subjected to aging procedure in the laboratory and the field. The indirect tensile repeated tests were applied to aged and original specimens. It was concluded that the fatigue life of the mixtures increased significantly with the increase of aging time. CR+Sasobit modified mixture aged at the both field and laboratory gave the highest load cycle among the mixtures.

**Keywords :** crumb rubber, warm mix asphalt, aging, fatigue

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