

BITUMEN COMPOSITION CONTAINING FULLY OR PARTIALLY HYDROGENATED
BLOCK COPOLYMER AND A PROCESS FOR ITS PREPARATION

ABSTRACT

A process for preparing a polymer-modified bitumen composition comprising the steps of: (i) preparing a masterbatch of a concentrated polymer- modified bitumen composition comprising blending (a) from 3.5 to 30 wt%, by weight of the concentrated polymer- modified bitumen composition, of a fully or partially hydrogenated block copolymer; (b) from 60.0wt% to 96.5 wt%, based on the total weight of the concentrated polymer-modified bitumen, of a bitumen component; (c) optionally a flux component; and (d) optionally one or more additional components; and (ii) diluting the masterbatch of concentrated polymer- modified bitumen composition produced in step (i) with one or more additional bitumen components thereby producing a diluted polymer-modified bitumen composition comprising 4 wt% or less, based on the total weight of the diluted polymer-modified bitumen composition, of the fully or partially hydrogenated block copolymer. The process according to the invention advantageously allows the long-term storage of the polymer-modified bitumen at a high concentration of the block copolymer thereby allowing for a high storage stability. Further, the application of diluted composition allows the paving to be carried out at a low concentration of block copolymer, allowing for good rutting and cracking properties. In addition, the process of the present invention allows for a reduction in the overall manufacturing cycle time of polymer- modified bitumen, as well as a reduction in energy consumption.

[Figure 1]