

## Use of Recycled PVB as a Protection against Carbonation

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**Abstract :** The paper is focused on testing of the poly(vinyl butyral) (PVB) layer which had the function of a CO<sub>2</sub> insulating protection against concrete and mortar carbonation. The barrier efficiency of PVB was verified by the measurement of diffusion characteristics. Two different types of PVB were tested; original extruded PVB sheet and PVB sheet made from PVB dispersion which was obtained from recycled windshields. The work deals with the testing CO<sub>2</sub> diffusion when polymer sheets were exposed to a CO<sub>2</sub> atmosphere (10% v/v CO<sub>2</sub>) with 0% RH. The excellent barrier capability against CO<sub>2</sub> permeability of original and also recycled types of PVB layers was observed. This application of PVB waste can bring advantageous use in civil engineering and significant environmental contribution.

**Keywords :** windshield, poly(vinyl butyral), mortar, diffusion, carbonatation, polymer waste

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