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# Effect of Aluminoborate Whiskers on Mechanical Properties of Polycarboxylate Cements

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**Abstract:**
The mechanical properties of polycarboxylate cements containing 20 mass% of four kinds of aluminoborate whiskers with different fiber lengths and diameters were evaluated. Bending strength of the cements increased with increase in fiber length, whereby the strength of the cement with the longest fiber was about two times greater than that of whisker-free cement. The diametral tensile strengths of the four fiber-reinforced cements were also about two times greater than that of whisker-free cement, but which was not dependent on fiber length. Compressive strength was the same or slightly higher than that of whisker-free cement. SEM observation of fractured specimen after diametral compression test showed high affinity between the cement matrix and the whisker.

**Key words:**
Polycarboxylate cement, Whisker, Mechanical property

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