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Technical Group
External Report

ARPRO®

Expanded Polypropylene (EPP) Foam

Multiple Cycle Impact

Sewer Ring Program
Black EPP; 120 g/l

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Summary

The following is a summary report of the evaluation of the Sewer Ring application utilizing Black ARPRO® Expanded Polypropylene (EPP) at a molded density of 120 g/l (7.5 pcf).

Properties evaluated are:

- Multi-Cycle Dynamic Compression

Results

Multi-Cycle Dynamic Impact

Multi-Cycle Dynamic Impact testing was performed on 3 samples using a load equivalent to produce an impact pressure of 22 psi. The test was performed for 1,000,000 cycles at a frequency of 1 Hz. The results are shown on the chart in Figure 1 below:

FIGURE 1

Sample Number	Pre-test Thickness (mm)	Post-test Thickness (mm)	Loss (%)
A	51.68	51.43	0.48%
B	52.21	51.98	0.44%
C	51.47	51.09	0.74%
Average:			**0.55%**

The results indicate an overall loss in thickness of 0.55%. Pictures of the Pre-test and Post-test thickness results are shown below for reference. No significant change in material state was noted, nor was any significant damage or deterioration noted.

See Figure 2 below for details:

FIGURE 2

Pre-Test Multiple Cycle Samples

Post-Test Multiple Cycle Samples