

14 August 2006

Ghislain Beauregard
President
Arcoplast, Inc.
1873 Williamstown Drive
St. Peters, MO 63376
1.888.736.2726

Re: Supplemental helium leak testing

Dear Ghislain,

Arcoplast, Inc. provided Technical Safety Services, Inc. (TSS) with three (3) preassembled panels for pressure leak testing. As supplied to TSS, one Arcoplast composite (6mm) center core wall and ceiling liner panel with antimicrobial gel-coat finish consisted of a standard 24"x24" (blank) panel, a second panel had a 12" sealed metal duct bonded to it and the third panel contained an electrical box with plug.

To verify the integrity of the apparatus used for pressure decay testing of the Arcoplast panels, a supplemental leak test was performed with helium gas and helium leak detection equipment. This testing was not formally documented; however, the subjective results of the helium leak test also support the formal pressure decay data and conclusions.

The apparatus, as set up for the helium leak test, utilized the 24" x 24" ArcoPlast panel with the electrical box. Note that during the formal pressure decay tests, panels were mounted with the finished-side of the panel facing "in", as the gel-coat side consistently attained a better seal to the gasketed perimeter of the apparatus than did the unfinished side. For the helium leak test, in order to simulate "worst-case" conditions, the panel was mounted with the finished-side facing "out". This also facilitated testing the outlet box and electrical hardware.

The assembly was pressurized to 5" w.g. with helium (Scott Specialty Gases High-Purity He, 99.995%, Product # 7440-59-7, cylinder/lot# 40003455). All seams, gaskets, and penetrations of the test apparatus, including the installed electrical fittings (bonded to the Arcoplast panel) were scanned with a calibrated helium leak detector (Uson model 196, TSS EQ# 1302, calibrated 7/12/2006). This included testing with the electrical outlet covers closed and also with the covers opened to permit scanning the interior of the electrical box.

No leakage was detected; more specifically, leakage was below detectable limits. The sensitivity of the helium leak detector is 1×10^{-5} ml/sec, or 10 ppm.

Sincerely,

Pete Mackes
Validation Manager

