

1151 Boston-Providence Turnpike  
 P.O. Box 9102 Norwood, MA 02062 USA  
 T: 781 762 4300 F: 781 762 9375 www.fmglobal.com

March 29, 2001

Mr. Ghislain Beauregard  
 Arcoplast, Inc.  
 858 Woodcove Court  
 Chesterfield, MO 63017

fax 636 530 9949

Subject: Research Testing of Arcoplast wall panel  
 Factory Mutual Research JI 3010214

Dear Mr. Beauregard:

I am writing to outline the testing completed to date for the subject project.

Flammability

One Flammability test series was completed to determine the convective flame spread parameter (FSPc) of the material. For exposed plastic materials this parameter has been used as a screening tool to help determine if full scale corner testing is reasonable. We tested the white, gel coated surface. The test is designed to evaluate monolithic materials. During the test, the gel coat was burned through so involvement of the resin system occurred. As a result, the validity of the results may be questionable. The test results are noted below:

Sample	$\Delta H_{ch}$	$L_e$	$q''_c$	TRP	FSPc
Test sample	15.09	1.67	20	281	0.38

$\Delta H_{ch}$  = chemical heat of combustion, kJ/g  
 $L_e$  = effective heat of gasification, kJ/g  
 $q''_c$  = critical heat flux, kW/m<sup>2</sup>  
 TRP = thermal response parameter, kW/m<sup>2</sup>s<sup>-1/2</sup>  
 FSP<sub>c</sub> = convective flame spread parameter, s<sup>-1/2</sup>


E84

One ASTM E84 test was conducted. The results were as follows:

Flame spread = 19  
 Smoke density index = 278

To-date, no Approvals have been granted for the above assemblies. If you wish to conduct additional tests or have any questions please advise.

Very truly yours,

Handwritten signature of Phillip J. Smith in cursive script.

Phillip J. Smith, PE  
Senior Engineer

Handwritten signature of J. P. Cauley in cursive script.

J. P. Cauley  
Senior Engineer