



July 31, 2012

Mr. Ward Judson
Erico International Corporation
34600 Solon Rd
Solon, OH 44139

Our Reference: File SV19142 / Project 12CA39371

Subject: UL Standard 2043, Third Edition
"Fire Test for Heat and Visible Smoke Release for Discrete Products and Their
Accessories Installed in Air-Handling Spaces".

Dear Mr. Judson:

This Report summarizes the data developed on the samples you provided which were subjected to the flame test described in UL Standard 2043, Third Edition. Testing was conducted at UL LLC (UL) on July 25, 2012 at our Northbrook testing facility.

GENERAL:

It should be understood that these results apply only to the particular sample submitted for testing. The test results indicated in this Report are not intended to imply Listing, Classification or Recognition of any product or materials.

The Classification Marking or Listing Mark of UL on the product is the only method provided by UL to identify products that have been produced under its Classification or Listing and Follow-Up Service.

In no event shall UL be responsible to anyone for whatever use or nonuse is made of the information contained in this Report and in no event shall UL, its employees, or its agents incur any obligation or liability for damages, including, but not limited to, consequential damages, arising out of or in connection with the use, or inability to use, the information contained in this Report.

TEST RECORD

SAMPLES:

The plastic housings evaluated are described in Table 1. UL did not witness the production of the test sample nor were we provided with information relative to the formulation or identification of component materials used in the manufacture of the test samples.

Table 1 - Sample Description

Sample Reference	Description
B	20 pieces of EC311P IN AV161 FROM POLYOLEFIN COMPANY

METHOD:

The tests were conducted in accordance with the test procedure described in UL Standard 2043, Third Edition ("Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces"), dated August 20, 2008. This test method is used to determine the heat release rate, smoke release and optical density of the samples. The test samples were positioned and installed in the test enclosure as described in Appendix A.

CRITERIA:

Test samples fail to meet the requirements of UL 2043 if any of the following criteria are exceeded:

- 1) The peak heat release rate shall be 100 kW or less during the test.
- 2) The peak optical density shall be 0.50 or less during the test.
- 3) The average normalized optical density shall be 0.15 or less during the test.

Note: The above criteria do not include the contribution of the propane ignition burner.

RESULTS:

The summary of test results is tabulated in Table 2 below. Graphs of heat release rate, smoke release rate, and normalized optical density are given in Appendix B. Pre and post-test photographs for each test are given in Appendix A. In addition, a videotape of each test was made and provided.

Table 2 - Test Results

Sample - Test Ref.	Peak Heat Release Rate (kW)	Peak Normalized Optical Density	Average Normalized Optical Density	Peak Smoke Release Rate (m²/s)	Total Smoke Released (m²)
B-1	24	0.18	0.01	0.07	6.4

Please note that the values in Table 2 above as well as the graphs in Appendix B omit the heat and smoke contribution from the propane ignition burner.

COMPLETION OF INVESTIGATION

Since this completes the anticipated work, we have instructed our Accounting Department to terminate the investigation and invoice you for the charges incurred to date.

If you have any questions, please do not hesitate to contact the undersigned.

Very truly yours

Reviewed by:

GEORGE HUNTER (847)-664-3481
Senior Project Engineer
3019B NBK FPD
George.Hunter@ul.com

RANDALL LAYMON (847)-664-2687
Senior Staff Engineer
3019E NBK FPD
Randall.K.Laymon@ul.com

APPENDIX A

TEST B-1

07251219

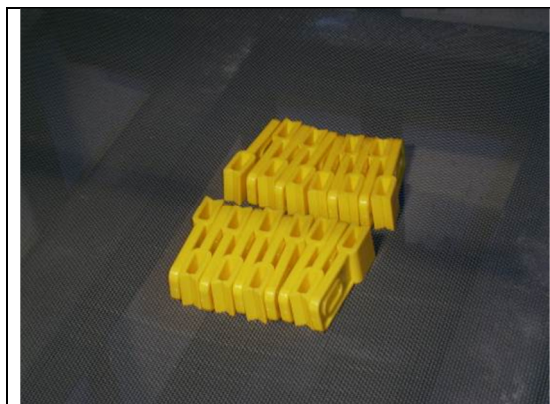
Sample Description: 20 pieces of EC311P IN AV161 FROM POLYOLEFIN CO.

Test Notes: The sample was positioned on fine wire mesh and situated above the center of the test burner. The sample was placed face down & up.

Post Test Observations: The sample was not still burning with no smoke at the conclusion of the test.

Photos:

Pre-Test



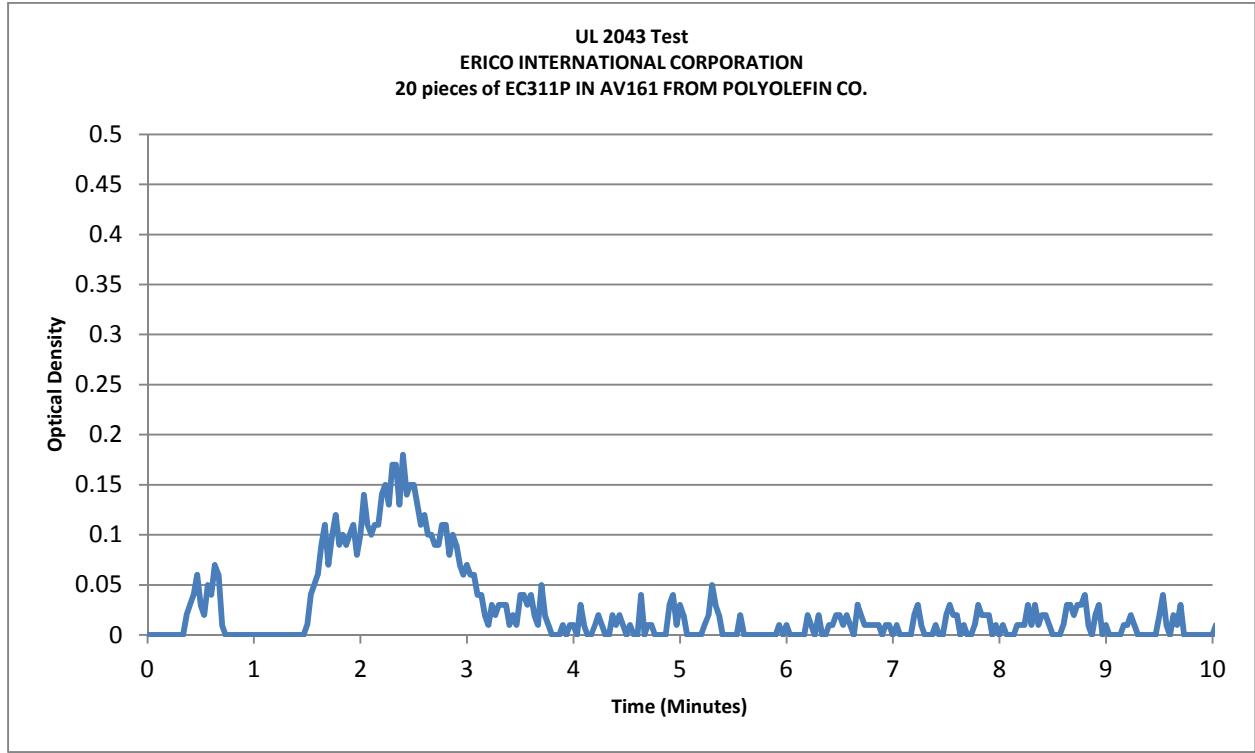
Post-Test



APPENDIX B

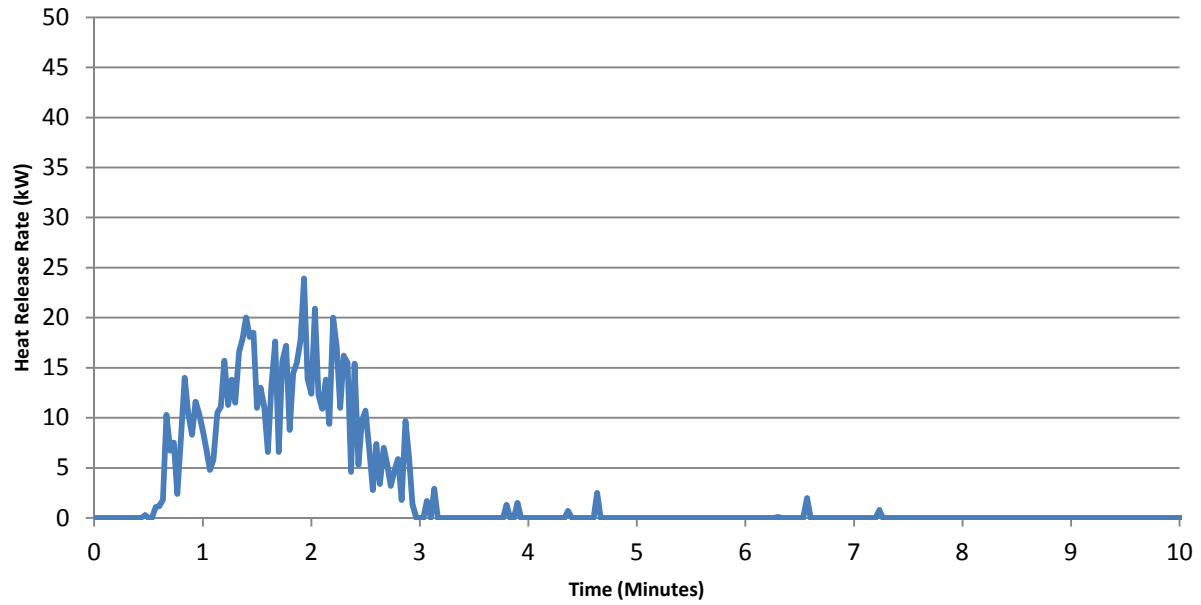
GRAPHICAL DATA

File SV19142, Project 12CA39371

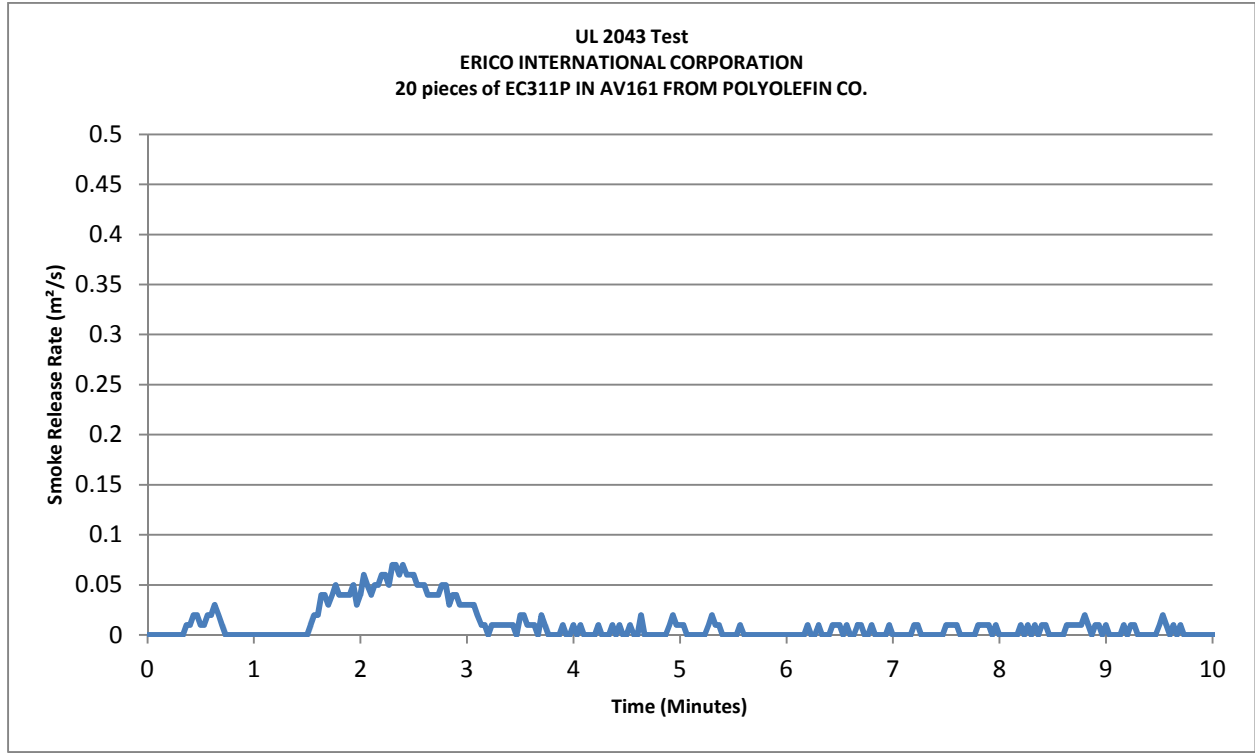


Test Number	Test Code	Description	Peak Normalized Optical Density	Average Normalized Optical Density
B-1	07251219	20 pieces of EC311P IN AV161 FROM POLYOLEFIN CO.	0.18	0.01

UL 2043 Test
ERICO INTERNATIONAL CORPORATION
20 pieces of EC311P IN AV161 FROM POLYOLEFIN CO.



Test Number	Test Code	Description	Peak Heat Release Rate (kW)
B-1	07251219	20 pieces of EC311P IN AV161 FROM POLYOLEFIN CO.	24



Test Number	Test Code	Description	Peak Smoke Release Rate (m²/s)	Total Smoke Released (m²)
B-1	07251219	20 pieces of EC311P IN AV161 FROM POLYOLEFIN CO.	0.07	6.4