



File Number: R38267

Project Number: 4786842089

June 18, 2015

REPORT

on

Caulking and Sealants

Under the

CLASSIFICATION PROGRAM

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DESCRIPTION

PRODUCT COVERED:

* The **Products** covered by this Report **are** Caulking and **Sealants** identified as **Akkim 805, 805P, 806, 812, 812P, 840, 840P, 870, 870P, 882, 940, 960 and 965.**

* The **products are** Classified by UL LLC (UL) as to Surface Burning Characteristics.

USE:

The product is intended for use as a building material as permitted by authorities having jurisdiction.

TEST RECORD NO. 1

GENERAL:

Test results relate only to the items tested.

EXAMINATION OF MATERIALS:

The materials used in this investigation were produced under the observation of a representative of UL, in a ready-to-use form. The composition of the finished material is of proprietary nature. Data on the composition is on file at UL for use in the Follow-Up Service Program.

Various physical and chemical tests were conducted on the components and finished products. The results developed from these tests were employed in establishing specifications for use in the factory Follow-Up Service Program.

SURFACE BURNING CHARACTERISTICS:

SAMPLES

The samples consisted of foamed plastic caulking and sealant, identified as "Akkim-812P" applied to 1/4 in. thick inorganic reinforced cement board in two 12.7 mm (1/2 in.) diameter beads, 8 in. on center covering 5.5 percent of the exposed test area.

Each test sample consisted of three 8 by 2 ft. wide boards butted end-to-end to form the required 24 ft. long surface.

For each test a piece of 1 ft. long by 22 in. wide by 1/16 in. thick uncoated steel plate was placed at the fire end of the tunnel furnace "upstream" from the gas burners to complete the 25 ft. chamber length.

The test samples were allowed to condition at a temperature of 73 ±4°F and a relative humidity of 50±5 percent prior to testing.

METHOD

The tests were conducted in accordance with Standard ANSI/UL723, Tenth Edition, dated September 10, 2008 with revisions through August 12, 2013, "Test for Surface Burning Characteristics of Building Materials", (ASTM E84).

RESULTS

Data on flame spread and smoke developed appears in the following tabulations. Graphs of flame spread versus time and smoke developed versus time are also provided as part of the Test Record.

Flame Spread Index

The maximum distance the flame spreads along the length of the sample from the end of the igniting flame is determined by observation.

The Flame Spread Index (FSI) of the material is determined by rounding the Calculated Flame Spread (CFS) as described in UL 723. The CFS is derived by calculating the area under the flame spread distance (ft.) versus time (min) curve, ignoring any flame front recession, and using one of the calculation methods as described below.

1. If the total area (A_T) is less than or equal to 97.5 min-ft., the CFS shall be 0.515 times the total area ($FSI=0.515 A_T$).

2. If the total area (A_T) is greater than 97.5 min-ft., the CFS is to be 4900 divided by 195 minus the total area ($FSI=4900/(195-A_T)$).

Table 1: Flame Spread Summary

| Test No. | Sample Description | Maximum Flame Spread (ft) | Time of Maximum Flame Spread (min:s) | Calculated Flame Spread (CFS) |
|----------|--------------------|---------------------------|--------------------------------------|-------------------------------|
| 1 | Akkim-812P | 0.0 | 0:06 | 0.00 |
| 2 | Akkim-812P | 0.0 | 0:04 | 0.00 |

| | |
|--------------------|---|
| Flame Spread Index | 0 |
|--------------------|---|

Smoke Developed Index

The smoke Developed Index is determined by rounding the Calculated Smoke Developed (CSD) as described in UL 723. The CSD is determined by the output of a photoelectric circuit operating across the furnace flue pipe. A curve is developed by plotting values of light absorption (decrease in cell output) against time. The CSD is derived by expressing the net area under the curve for this material as a percentage of the net area under the curve for untreated red oak.

The CSD is expressed as:

$$\text{CSD} = (A_M / A_{ro}) \times 100$$

Where:

CSD=Calculated Smoke Developed

A_M = The area under the curve for the test material

A_{ro} = The area under the curve for untreated red oak

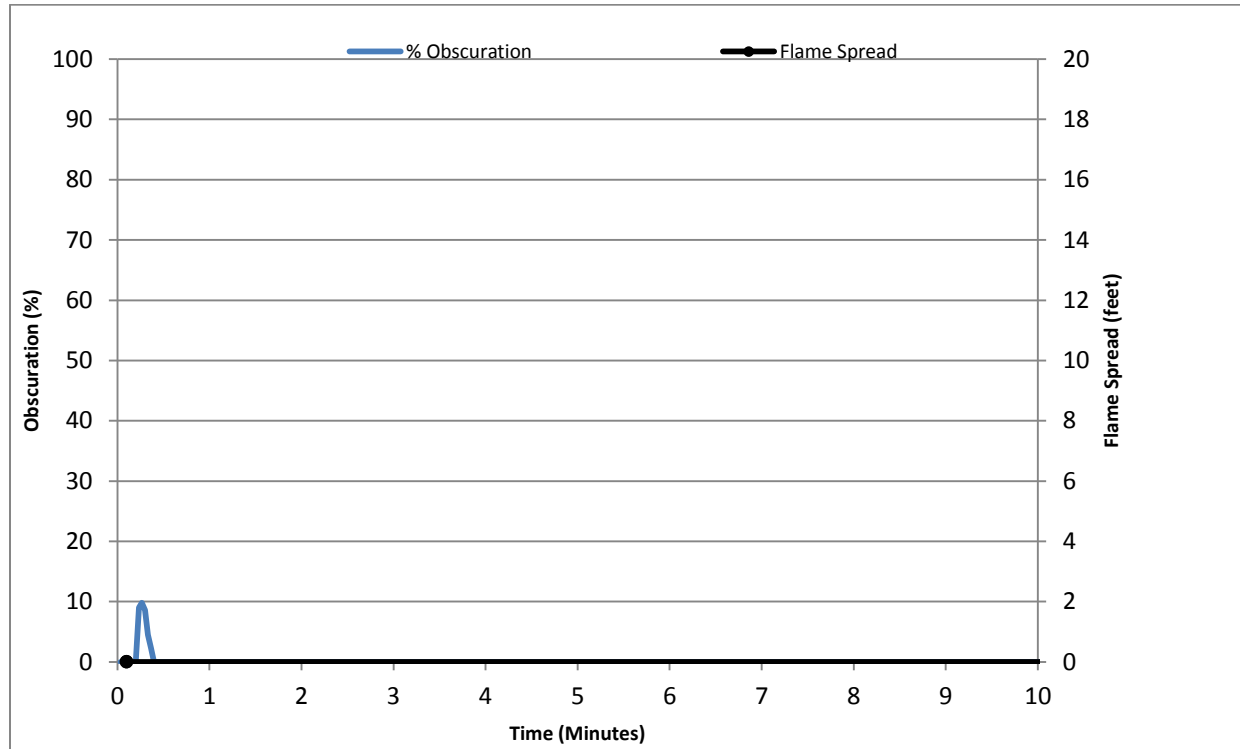
Table 2: Smoke Developed Summary

| Test No. | Sample Description | CSD Calculated Smoke Developed |
|-----------------|---------------------------|---------------------------------------|
| 1 | Akkim-812P | 1.3 |
| 2 | Akkim-812P | 1.6 |

| | |
|-----------------------|---|
| Smoke Developed Index | 0 |
|-----------------------|---|

Flame Spread / Smoke Results

Akkim Yapi Kimyasallari Sanayi Ve Ticaaret A S
Akkim-812P

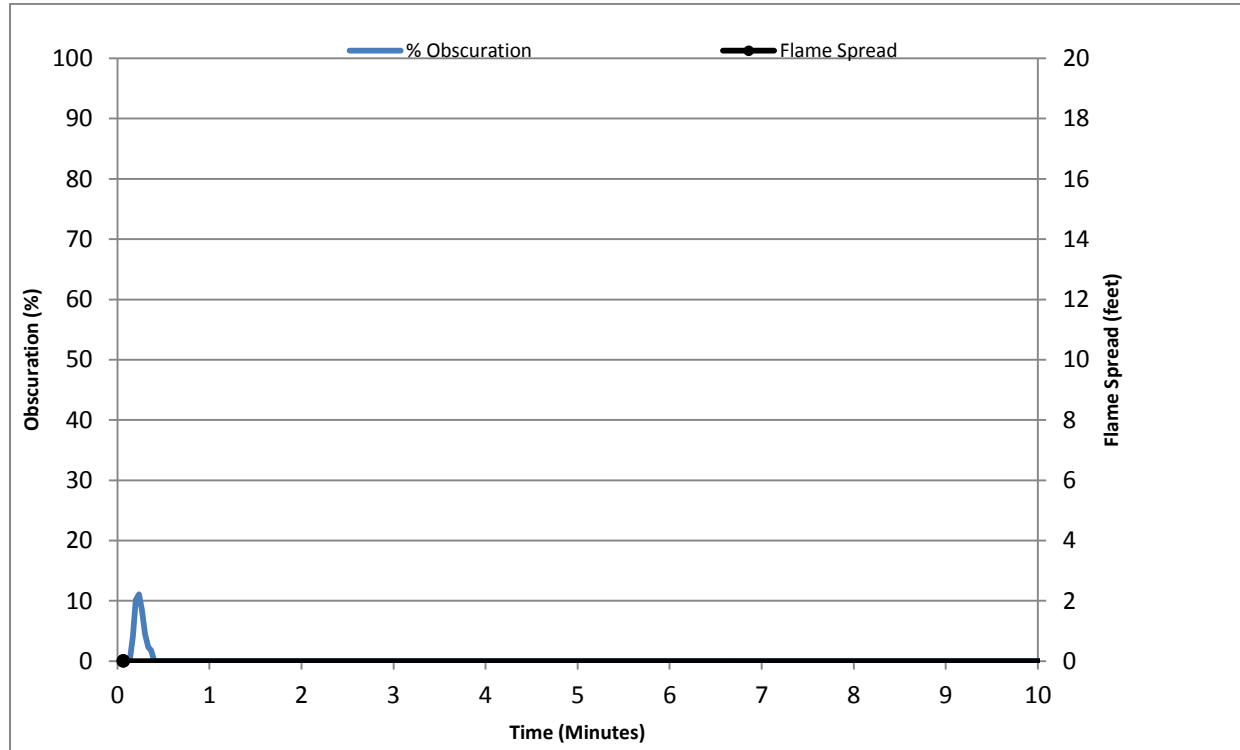


Test Num.: 1
R38267 / 4786842089
06051510

Flame Spread Index: 0
Smoke Developed Index: 0
Max. Flame Spread (ft.): 0.0

Flame Spread / Smoke Results

Akkim Yapi Kimyasallari Sanayi Ve Ticaaret A S
Akkim-812P



Test Num.: 2
R38267 / 4786842089
06051511

Flame Spread Index: 0
Smoke Developed Index: 0
Max. Flame Spread (ft.): 0.0

TEST RECORD SUMMARY:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the Standard for Surface Burning Characteristics for Building Materials, UL723, Tenth Edition (dated September 10, 2008 with revisions through August 12, 2013) and, therefore, such products are judged eligible to bear UL's Mark as described below and on the Conclusion Page of this Report.

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL or any authorized licensee of UL.

CLASSIFICATION MARKING:

The Surface Burning Characteristics as shown below in the Classification Marking represent the judgment of UL based upon the results of the examination and tests presented in this Report.



Caulking & Sealants
SURFACE BURNING CHARACTERISTICS
Applied to Inorganic
Reinforced Cement Board+
Flame Spread 0
Smoke Developed 0

+ - Tested in two 12.7 mm (1/2 in.) wide diameter beads, 8 in. O.C. covering 5.5 percent of the exposed test sample area

Test Record No. 1 by:

Handwritten signature of Judith G. Marzullo in black ink.

JUDITH G. MARZULLO
Lead Engineering Associate
Building Materials & Systems

Reviewed by:

Handwritten signature of James F. Smith in black ink.

JAMES F. SMITH
Staff Engineering Associate
Building Materials & Systems

TEST RECORD NO. 2

SAMPLE:

Caulking and sealants identified as Akkim 805, 805P, 806, 812, 840, 840P, 870, 870P, 877P, 882, 960 and 965. Test results relate only to the items tested.

STUDY FOR CLASSIFICATION PURPOSES:


Testing of the Akkim 805, 805P, 806, 812, 840, 840P, 870, 870P, 877P, 882, 960 and 965 for Surface Burning Characteristics was not considered necessary based upon information documented internally in Test Reference No. 1.

TEST RECORD 2 SUMMARY:

The results of this investigation indicate that the caulking and sealants evaluated in this test record comply with applicable requirements, and therefore, is judged to be eligible for Classification under the Laboratories product categories of Surface Burning Characteristics (BRYX).

| Standard | Title | Edition or Publication Date | Latest Revision Date |
|------------|--|-----------------------------|----------------------|
| ANSI/UL723 | Surface Burning Characteristics for Building Materials | Tenth | August 12, 2013 |

The Classification Mark for the BRYX category (UL723) to be used on the Akkim 805, 805P, 806, 812, 840, 840P, 870, 870P, 877P, 882, 960 and 965 is illustrated below:

| | |
|---|---|
|  | Caulking & Sealants SURFACE BURNING CHARACTERISTICS Applied to Inorganic Reinforced Cement Board+ |
| | Flame Spread 0 |
| | Smoke Developed 0 + - Tested in two 12.7 mm (1/2 in.) wide diameter beads, 8 in. O.C. covering 5.5 percent of the exposed test sample area |

Test Record No. 2 by:



JUDITH G. MARZULLO
Lead Engineering Associate
Building Materials & Systems

Reviewed by:



JAMES F. SMITH
Staff Engineering Associate
Building Materials & Systems

CONCLUSION

Samples of the product covered by this Report have been found to comply with the requirements covering the category and the products are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the samples investigated by UL and does not signify UL certification or that the product described is covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the UL Classification Mark on such products which comply with UL's Follow-Up Service Procedure and any other application requirements of UL. The Classification Mark of UL on the product, or the UL symbol on the product and the Classification Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Classification and Follow-Up Service.

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