



File R38238
Project 4786564016

July 01, 2015

REPORT

on

Coatings

Under the

CLASSIFICATION PROGRAM

International Coatings Group, Inc.
Fort Lauderdale, FL

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DESCRIPTION

PRODUCT COVERED:

The Product covered by this Report is a spray-applied fire-retardant coating designated ICG FBL-100 and currently classified in Vol. 1 Sec. 1 of file R38238 for Surface Burning Characteristics under the Fire Retardant Coating Category.

Under this project, the product is Classified for Wall Construction as to Fire Growth and Damageability in accordance with ANSI/UL1715.

USE

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

TEST RECORD NO. 1

EXAMINATION OF MATERIALS:

The fire retardant coating used in this investigation was produced under Underwriters Laboratories Inc. Follow Up Service program and bore the UL Classification Marking. The coating was applied at a rate of 56 ft²/gal. over 2 in. thick, 2.0 pcf density, UL Classified spray-applied foamed plastic with a Flame Spread Index of 40 and Smoke Developed Index of 350-450.

METHOD:

The test was conducted in accordance with the UL 1715, 3rd edition, "Fire Test of Interior Finish Material", for walls only.

TEST ASSEMBLY

Sample Construction

The test room was composed of wood studs, 16 in. OC faced with 5/8 in. gypsum wallboard creating 8 ft. by 8 ft. wall sections on the left and rear walls (adjacent to the ignition source location). These wall sections were recessed 2 in. from the interior dimensions of the room to allow for sample application.

The 2.0 pcf foamed plastic was applied at 2 in. thickness to the two walls forming the corner with the ignition source. The foam was allowed to cure for 48 hours prior to coating application. The FBL-100 coating was applied at a rate of 56 ft²/gal. over the finished foam.

The corner construction was enclosed with walls and ceiling composed of wood studs, 16 in. OC faced with 5/8 in. gypsum wallboard to complete a room 8 ft. wide by 12 ft. deep and 8 ft. high, with a 2 ft., 6 in. by 7 ft. doorway.

TEMPERATURE MEASUREMENT

Location of thermocouples used to monitor temperature are shown in UL1715 Figure 9.1 and Figure B2.1. The four thermocouples directly above the ignition source were No. 14 gauge (0.063 in. diameter), Type K (chromel-alumel) thermocouples. The leads of the thermocouples were mounted in ceramic insulators within 1/2 in. diameter black iron pipe, with the bare junction protruding 1 in. beyond the end of the ceramic insulators and 3 in. beyond the end of the iron pipe. The remaining thermocouples used to measure temperatures at various locations in the room geometry were No. 29 gauge (0.011 in. diameter), Type K (chromel-alumel) thermocouples in inconel shields.

IGNITION SOURCE

A nominal 30 lb. wood crib was used as the ignition source. The crib was constructed of top grade fir lumber sticks, nominally 2 by 2 in. (1-1/2 by 1-1/2 in. actual), each 15 in. long. The cribs were constructed with ten tiers, with five sticks in each tier, and placed into a curing cell at 120°F at 20 percent relative humidity until constant weight was achieved, resulting in a moisture content of less than 8 percent. Immediately prior to test, the crib was adjusted by the addition of dried sticks, to a final weight of 30 ± 1 lb.

IGNITION PROCEDURE

To prepare for placement of the wood crib, four brick pieces, nominally 4 by 4 by 3 in., were placed to provide support of the crib and provide a nominal 3 in. space between the floor and the lower surface of the crib. One pound of shredded wood excelsior fully fluffed, was arranged among the bricks, with excelsior covering an area approximately 21 by 21 in. To initiate the test, the wood excelsior was wetted with 4 oz. of absolute ethyl alcohol and the crib was set in place on the bricks, at a horizontal distance of 1 in. from the surface of each intersecting wall. At the start of the test, a flaming probe was applied at two locations in the dry excelsior.

At ignition, flames progressed steadily through the dry excelsior, until the alcohol wetted portion was reached. At this point, flames flashed through the entire remaining excelsior providing uniform application of ignition flame beneath the entire crib.

Test observations were recorded during and after the conduct of the test.

PHOTOGRAPHIC DOCUMENTATION

A series of digital prints and video recording were taken during the course of the test.

RESULTS:

TEST OBSERVATIONS

Test Time, min:s	Observations
00:00	Ignition of excelsior.
01:00	Flame at 3 ft. Light smoke.
01:30	Flames at 4 ft. Light smoke.
2:00	Flames at ceiling. Light smoke.
02:30	Flames at ceiling. Char at 4 ft along left wall. Very light smoke.
03:30	Flame at 4 ft. along left wall. Medium smoke.
05:00	No further significant flame progression. Medium smoke.
08:00	No further significant flame progression. Medium smoke.
10:00	New flame propagation on left wall 2 ft. from ignition source. Medium smoke.
12:30	Flame propagation at 3 feet along left wall. Medium smoke.
14:00	Significantly reduced flame propagation. Light-Medium smoke.
15:00	Test terminated.

TEMPERATURE DEVELOPMENT

A temperature graph of the test thermocouples is shown in ILL. 1.

POST-TEST OBSERVATIONS

The extent of damage after the test is shown in ILLS. 2, 3, and 4.

CONCLUSION

The following conclusions represent the judgment of Underwriters Laboratories Inc., based on the results of the examination and testing presented in this Report.

FLAME SPREAD RESISTANCE

During the test the observed surface burning did not extend to the extremities of the test specimen, nor did flames project through the doorway at any time.

RESISTANCE TO DAMAGE

The combustible damage of the test panels was judged to be within acceptable limits. The extent of damage to the foamed plastic core material diminished proportionally to the distance from the corner.

FOLLOW-UP PROGRAM

The products covered by this Report are judged to be eligible for Classification and Follow-Up Service. The manufacturer is authorized to use the UL Classification Marking as shown below on such products that comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products that properly bear the UL Classification Marking are considered as Classified by Underwriters Laboratories Inc.

CLASSIFICATION MARKING:

COATINGS, FIRE RETARDANT FOR WALL CONSTRUCTION AS TO FIRE GROWTH AND
DAMAGEABILITY IN ACCORDANCE WITH ANSI/UL1715
CERTIFIED

FOR USE WITHOUT A THERMAL BARRIER IN ACCORDANCE WITH SECTION 2603.9 OF THE
INTERNATIONAL BUILDING CODE WHEN INVESTIGATED TO ANSI/UL 1715. CERTIFICATION
CONTINGENT ON COATING APPLIED IN ACCORDANCE WITH MANUFACTURER'S APPLICATION
INSTRUCTIONS AT A COVERAGE RATE OF 56 FT²/GAL OVER MAXIMUM 2 IN. THICK, 2.0
PCF SPRAY-APPLIED FOAMED PLASTIC WITH MAXIMUM SURFACE BURNING CHARACTERISTICS
OF FLAME SPREAD INDEX OF 40 AND SMOKE DEVELOPED INDEX OF 450.

Report by:

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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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ILL. 1







