MAGIC® FIRE TESTING BULLETIN

Fire Testing On Magic Display Media

Magic® display products were tested for flammability following ASTM E84 Tunnel Test for Surface Burning Characteristics of Building Materials. The purpose of the testing is to ensure that materials used inside buildings are not highly flammable or cause poisonous smoke. Samples are typically mounted on rods & wire or on inorganic Rain Forest Cement Boards. Commercial areas require a flame spread of 25 or less. The most stringent requirements may be for the Coast Guard where ships require 10 or less. This test procedure is similar to UL-723, ANSI No. 2.5, NFPA No. 255, and UBC 42-1.

FLAME SPREAD

The flame spread index of the material is derived by plotting the progression of the flame front on a time-distant scale, ignoring any flame front recession, and using one of the calculation methods described below:

A. Flame Spread Index = 0.515 At when At is less than or equal to 97.5 minute-foot

B. Flame Spread Index = 4900/(195-At) when At is greater than 97.5 minute foot
Where At = total area under the time distance curve expressed in minute-foot.

Class	Flame-Spread
A	0-25
B	26-75
C	76-100

Class A is the desired rating. Class A material can be used in any room of a building, ship, or even airplanes. B & C can still be widely used in all areas except the hallways leading to exits. Check local fire codes.

SMOKE DEVELOPMENT

The smoke development during the test is indicated 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 ouput) against time. The calculated value for smoke development index is derived by expressing the net area under the curve for this material as the percentage of the area under the curve for untreated red oak. The smoke development index is expressed as:

Smoke development index = (Am-Aro) x 100
Where: Am = The area under the curve for the test material
Aro = The area under the cure for untreated red oak

FLAME DISTANCE

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

TEST RESULTS

See page 2 for test results on

*Magic Wide Format Water-Based Ink Jet Media

*Magic Solvent, Eco-Solvent & UV Cure Ink Jet Media

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InteliCoat Technologies

For more information, call 1-800-628-8604,
or visit our website: www.magicinkjet.com

* Most updated version of this guide can be obtained on our website.

07/18/08

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TEST RESULTS

Magic Wide Format Water-Based Ink Jet Media

Product	Test Substrate	Flame Spread	Smoke Dev.	Flame Distance (feet)	(seconds)	Classification (A, B, C)
DMiBOP10	Rods & Wire	5.0	5.2	1.0	0:25	A
	5/8" Gypsum	20.0	20.0	4.0	0:36	A
	5/8" Gypsum/Liquid Lam	45.0	10.0	9.6	1:03	B
TB9	Rods & Wire	7.4	102.5	1.5	0:34	A
DMVB14	Rods & Wire	25.0	250	5.5	0:30	A
PPM7	Rods & Wire	50.0	195.0	10.0	1:19	B
DMVLA5	IRC Board	4.1	1.6	0.5	0:21	A
FAB-6	Rods & Wire	15.0	10.0	3.0	0:19	A
POSPRO+300	Rods & Wire	55.0	85.0	4.0	1:00	B
DMBPC12	Rods & Wire	5.0	5.0	1.0	0:27	A
SBL-7, DMBP-5, FAB-6	In complinace with Germany B1 fire regulations testing.					

Magic Solvent, Eco-Solvent & UV Cure Ink Jet Media

Product	Test Substrate	Flame Spread	Smoke Dev.	Flame Distance (feet)	(seconds)	Classification (A, B, C)
PPM7	Rods & Wire	50.0	195.0	10.0	1:19	B
GFiOP140	Cement Board	0	3.0	1.0	6:40	A
	5/8" Gypsum Board/ Liq Lam	20.0	5.0	4.0	0:36	A
GFiOP212	Cement Board	0	5.0	1.0	6:35	A
	5/8" Gypsum Board/Liq Lam	20.0	5.0	4.1	1:02	A
GFTRP	Cement Board	0	3.0	0	0:37	A
	5/8" Gypsum Board/Liq Lam	25.0	4.0	5.0	1:00	A
FAB-6	Rods & Wire	15.0	10.0	3.0	0:19	A
TB9	Rods & Wire	7.4	102.5	1.5	0:34	A
POSPRO+300	Rods & Wire	55.0	85.0	4.0	1.00	B
GFCVM	Rods & Wire	35.0	55.0	11.3	0.80	B
GFCVG	Rods & Wire	50.0	80.0	14.2	0.90	B
FAB-FR	As manufactured, meets performance requirements as stated in NFPA 701 test method					
SBL-7, FAB-6	In compliance with Germany B1 fire regulations testing.					

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