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CLASSIFICATION

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2007+A1:2009

Classification no.	2016-Efectis-R001311[Rev.1]
Sponsor	Avery Dennison Willem Einthovenstraat 11 2342 BH OEGSTGEEST THE NETHERLANDS
Product name	**Avery Dennison® MPI™ 3000/3020 HOP series**
Prepared by	Efectis Nederland BV
Notified body no.	1234
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1. INTRODUCTION

1.1 PRODUCT NAME

This classification report defines the classification assigned to **MPI Avery Dennison® MPI™ 3000/3020 HOP series i**n accordance with the procedures given in EN 13501-1:2007+A1:2009.

1.2 REVISION INFORMATION

Two additional product types, namely **Avery Dennison® MPI™ 3004 HOP EA** and **Avery Dennison® MPI™ 3024 HOP** have been tested in accordance with the procedures given in EN 13501-1:2007+A1:2009.
The results are included in this classification report as these product types fall within the **MPI Avery Dennison® MPI™ 3000/3020 HOP series**.

Original date of issue: October 2016

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The product, **Avery Dennison® MPI™ 3000/3020 HOP series**, is defined as a wall covering.

2.2 MANUFACTURER

Avery Dennison
Graphics & Reflective Solutions
P.O. Box 28
2300 AA LEIDEN
THE NETHERLANDS

2.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of:

- MPI™ 3000 HOP series
  - Film: 95 µm gloss white high opacity
  - Adhesive:
    - MPI 3000 HOP: Permanent, clear, acrylic based
    - MPI 3001 HOP: Removable, clear, acrylic based
    - MPI 3004 HOP EA: Removable, clear, acrylic based
  - Backing paper:
    - MPI 3000/3001 HOP: Clay coated kraft paper, 125 g/m^2
    - MPI 3004 HOP EA: Clay coated kraft paper with air egress channels, 136 g/m^2

- MPI™ 3020 HOP series
  - Film : 95 µm matt white high opacity
  - Adhesive :
    - MPI 3020 HOP: Permanent, clear, acrylic based
    - MPI 3021 HOP: Removable, clear, acrylic based
    - MPI 3024 HOP EA: Removable, clear, acrylic based
  - Backing paper:
    - MPI 3020/3021 HOP: Clay coated kraft paper, 125 g/m^2
    - MPI 3024 HOP EA: Clay coated kraft paper with air egress channels, 136 g/m^2

The product has a thickness of approx. 95 µm and a mass per unit area of approx. 150 g/m^2, (measured on the product).
See also Appendix 'Product data sheets' in the test reports.

3. STANDARDS, REPORTS, RESULTS AND CRITERIA IN SUPPORT OF THIS CLASSIFICATION

3.1 APPLICABLE (PRODUCT) STANDARDS

EN ISO 11925-2:2010	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
EN 13823:2010+A1:2014	Reaction to fire tests for building products - Building products, excluding floorings exposed to the thermal attack by a single burning item
EN 13501-1:2007+A1:2009	Fire classification of construction products and building elements Part 1: Classification using data from reaction to fire tests

3.2 REPORTS

Name of Laboratories	Name of sponsor	Report ref. no.	Test method
Efectis Nederland BV THE NETHERLANDS	Avery Dennison Graphics & Reflective Solutions THE NETHERLANDS	2016-Efectis-R001213 2016-Efectis-R001301 2018-Efectis-R001400	EN ISO 11925-2:2010 EN 13823:2014 EN 13823:2014

3.3 TEST RESULTS

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – mean (m)	Compliance with parameters
EN ISO 11925-2				
surface flame impingement	Fs ≤150 mm	6	20	-
	Ignition of filter paper		-	Compliant
Edge flame Impingement	Fs ≤150 mm	6	18	-
	Ignition of filter paper		-	Compliant
EN 13823				
MPI 3001	$FIGRA_{0.2MJ}$ [W/s]	3	94	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.7	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		26.1	-
	TSP_{600s} [m^2]		37	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
MPI 3000	$FIGRA_{0.2MJ}$ [W/s]	1	0	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.4	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		19.0	-
	TSP_{600s} [m^2]		54 [1])	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
MPI 3004	$FIGRA_{0.2MJ}$ [W/s]	1	52	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.6	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		17.2	-
	TSP_{600s} [m^2]		58 [1])	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – mean (m)	Compliance with parameters
EN 13823				
MPI 3020	$FIGRA_{0.2MJ}$ [W/s]	1	0	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.7	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		19.6	-
	TSP_{600s} [m^2]		60 [1])	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
MPI 3021	$FIGRA_{0.2MJ}$ [W/s]	1	46	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.6	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		23.1	-
	TSP_{600s} [m^2]		61 [1])	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
MPI 3024	$FIGRA_{0.2MJ}$ [W/s]	1	100 [2])	-
	$FIGRA_{0.4MJ}$ [W/s]		0	-
	THR_{600s} [MJ]		0.6	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		25.6	-
	TSP_{600s} [m^2]		58 [1])	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant

[1]) All mentioned values for the TSP_{600s} are not corrected for the smoke production according to the Note in §A.6.1.2 of EN 13823. Based on the level of the smoke correction of the TSP of the SBI system at Efectis, it is expected that, when correction is applied, the TSP will comply to the criteria for s1 classification,.
[2]) The values of the determined properties of the added type MPI 3024 are compared with the values of the type MPI 3001 used for classification.
The determined value for the $FIGRA_{0.2MJ}$ falls within the distribution of the individual determined values for type MPI 3001 (70, 96 respectively 115 W/s = average 94 W/s).

3.4 CLASSIFICATION CRITERIA

Fire classification of construction products and building elements Excluding floorings and linear pipe thermal insulation products			
Classification criteria			
Class Test method(s)	**B**	**C**	**D**
EN ISO 11925-2 Exposure = 30 s	$F_s \leq 150$ mm within 60 s Ignition of the paper in EN ISO 11925-2 results in a d2 classification.		
EN 13823	$FIGRA_{0.2\ MJ} \leq 120$ W/s LFS < edge of specimen $THR_{600s} \leq 7.5$ MJ	$FIGRA_{0.4\ MJ} \leq 250$ W/s LFS < edge of specimen $THR_{600s} \leq 15$ MJ	$FIGRA_{0.4\ MJ} \leq 750$ W/s
Additional classification			
Smoke production	**s1** = SMOGRA ≤ 30 m^2/s^2 and $TSP_{600s} \leq 50$ m^2 ; **s2** = SMOGRA ≤ 180 m^2/s^2 and $TSP_{600s} \leq 200$ m^2; **s3** = not s1 or s2		
Flaming Droplets/particles	**d0** = no flaming droplets/ particles in EN 13823 within 600 s; **d1** = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s; **d2** = not d0 or d1.		

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 11 of EN 13501-1:2007+ A1:2009.

4.2 CLASSIFICATION

The product, **Avery Dennison® MPI™ 3000/3020 HOP series**, in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

Reaction to fire classification: B – s1, d0

4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

Thickness -Film	95 µm
Surface density	Approx. 150 g/m^2

This classification is valid for the following end use applications:

Substrate	Steel sheet, thickness approx. 1.2 mm (class A1/A2 according to EN 13238:2010)
Air gap	Including an air gap
Methods and means of fixing	Glued, using the products adhesive
Joints	Vertical joints only
Other aspects of end use conditions	Wall covering

4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

There are no limitations in time on the validity of this report.

5. LIMITATIONS

This classification document does not represent type approval or certification of the product.

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