



## FMVSS 302 Flammability test for motor vehicle interiors

### The test method

Federal Motor Vehicle Safety Standards (FMVSS) are U.S. federal regulations. Standard FMVSS 302 relates to the burning behaviour of materials used inside road vehicles such as passenger cars, trucks, buses and agriculture machinery. It was developed to help reduce deaths and injuries to occupants caused by vehicle fires, especially from discarded cigarettes and matches. Most automotive OEMs specify flammability testing based on FMVSS 302 and technically equivalent OEM standards.

The test sample is held horizontally in a U-shaped holder and exposed to a flame for 15 seconds in a combustion chamber, in order to see if/when the flame extinguishes, or the time taken for the flame to pass a defined distance. The burning rate per minute is then calculated. For most automotive applications, a burning rate of no more than 100 mm/min is acceptable, although some vehicle manufacturers have tightened the requirements.

**The test protocol described in FMVSS 302 can be used for testing label materials individually, or when applied to substrates.**



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## Tested materials

Avery Dennison offers a range of materials that, when tested on their own, meet FMVSS 302 flammability requirements.

Product Code	Product Description	Burning rate (mm/min)	
		Machine direction	Cross direction
BF481	Transfer PO White - S8020 - BG42wh	0	0
BF483	Transfer PO Clear - S8020 - BG42wh	0	0
AA648	PVC Outdoor White - AL170 - BG42wh	0	0
AA948	PVC Outdoor Matt White - AL170 - BG42wh	0	0
AZ880	PVC Outdoor Clear - AL170 - BG42wh	0	0
AW627	PVC Outdoor Matt Clear - AL170 - BG42wh	0	0
AE492	PVC Outdoor Yellow - AL170 - BG42wh	0	0
AE357	Transfer PVC 50 Cast White - S8065 - BG50wh	0	0
AI995	Transfer PVC 50 Cast Clear - S8065 - BG50wh	69	64
AE416	Transfer PVC 50 Cast Silver - S8065 - BG50wh	0	0
AE359	Transfer PVC 50 Cast Yellow - S8065 - BG50wh	0	0

In addition, several materials have been tested successfully to FMVSS 302 standards when they have been applied full surface to slow burning plastic panels used in the automotive industry.

For the tests the following panels were used:

Lanxess Durethan BKV30H2.0; Color: 901510, caliper: 3 mm, with a burning rate of 4,1 mm/min.

Product Code	Product Description	Burning rate (mm/min)
	Of label material tested in combination with Lanxess Durethan BKV30H2.0	
AA642	Transfer PET white TOP – AL170	17,2
AA670	Transfer PET white TOP – S8015	13,6
AJ059	Transfer PET white TOP – S8049	14,4
AF030	Transfer PET matt white TC6 – S8001	8,2
AA145	Transfer PET matt white – AL170	16,6
AF032	Transfer PET matt chrome TOP – S8001	13,4
AD221	Transfer PET matt chrome TOP – S8030	4,9
AA146	Transfer PET matt silver – AL170	10,7
AA642 + AC747	Transfer PET white TOP – AL170 laminated with Overlam PET 25 matt – AL170	13,1
AJ059 - AC747	Transfer PET white TOP – S8049 laminated with Overlam PET 25 matt – AL170	8,6

All listed materials burnt at a rate far below 100 mm/min and thus pass the requirements of FMVSS 302, when tested in combination with a slow burning plastic panel as described.

For further information please look on our website or contact your Avery Dennison sales representative.

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