

MINISTERE DES TRANSPORTS

Luxembourg, le 06 septembre 2006
19-21, Boulevard Royal
L-2910 Luxembourg
Tél 478-1 – Télécopieur 241817 – Télex 1465 CIVAIR LU

REFERENCE: E13*104R00*104R00*0001*00

ANNEXES: Documentation technique

COMMUNICATION



Objet 2/:
Concerning 2/:

- **DELIVRANCE D'UNE HOMOLOGATION**
APPROVAL GRANTED
- **EXTENSION D'HOMOLOGATION**
APPROVAL EXTENDED
- **REFUS D'HOMOLOGATION**
APPROVAL REFUSED
- **RETRAIT D'HOMOLOGATION**
APPROVAL WITHDRAWN
- **ARRET DEFINITIF DE LA PRODUCTION**
PRODUCTION DEFINITELY DISCONTINUED

de marquage rétro réfléchissant pour véhicules lourds et longs et leur remorques, conformément au Règlement N° 104
of retro-reflective markings of heavy and long vehicles and their trailers, pursuant to Regulation N° 104

Numéro d'homologation:

Approval number:

E13*104R00*104R00*0001*00

Marque d'homologation:

Approval mark:

C



104 R- 000001

1. Nom commercial de marquage rétro réfléchissant:

Trade name mark of the marking material:

AVERY DENNISON

type: V6700/B (METALIZED)

2. Classe de matériau de marquage 2/:

Class of the marking material 2/:

C / D / E

3. Nom et adresse du fabricant:

Name and address of the manufacturer:

AVERY DENNISON Reflective Products
6565 W Howard St
Niles IL 60714 (USA)

4. Le cas échéant, nom et adresse du représentant du fabricant:

If applicable, name and address of the manufacturer's representative:

PREALUX srl
Via A. Berlese, 1
I-24124 Bergamo (BG)

5. Date à laquelle le matériau de marquage à été soumis aux essais d'homologation:

Date on which the marking material was submitted for approval test:

25.07.2006

6. **Autorité déléguée:**
Assigned authority: *Société Nationale de Certification et d'Homologation
L-5201 Sandweiler*
- Service technique chargé des essais
d'homologation:**
Technical service responsible for carrying out the
approval tests: Luxcontrol SA
B.P. 349
L-4004 Esch-sur-Alzette
7. **Date du procès-verbal délivré par le
service technique:**
Date of test report issued by the technical service: 01.08.2006
8. **Numéro du procès-verbal délivré par
le service technique:**
Number of test report issued by the technical service: LCA 54 588 002 6
9. **Observations:**
Remarks: not applicable
10. **Homologation 2:**
Approval 2: accordée / ~~refusée~~ / ~~étendue~~ / ~~retirée~~
granted / ~~refused~~ / ~~extended~~ / ~~withdrawn~~
11. **Motif(s) de l'extension d'homologation
(le cas échéant):**
Reason(s) for the extension (if applicable): not applicable
12. **Fait à:**
Place: Luxembourg
13. **Date:**
Date: 06 septembre 2006
14. **Signature:**
Signature:

Pour le Ministre des Transports



A handwritten signature in black ink, appearing to read "Paul Schmit".



Paul SCHMIT
Commissaire du Gouvernement

15. **La liste des documents constituant le dossier d'homologation déposés auprès du service administratif qui a délivré l'homologation, et qui est annexée à la présente communication, peut être obtenue sur demande.**

Annexed is a list of documents making up the approval file, deposited with the competent authority which granted approval; a copy can be obtained on request.

*voir "INDEX DU DOSSIER D'HOMOLOGATION" ci-joint /
see "INDEX TO TYPE-APPROVAL REPORT"*

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Luxembourg, le 06 septembre 2006
19-21, Boulevard Royal
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REFERENCE: E13*104R00*104R00*0001*00

ANNEXES: Documentation technique

Index du dossier d'homologation
Index to type-approval

	Numéro d'homologation: Approval number:	E13*104R00*104R00*0001*00
	Révision: Revision:	00
	Marque de fabrication ou de commerce: Trade name or mark:	AVERY DENNISON
	Type: Type:	V6700/B (METALIZED)
1.	Procès-verbal d'essai: Test report:	N° LCA 54 588 002 6
	- Technical report: - Index to information package:	Pages 1 to 5; Annex A, Page
2.	Dossier du constructeur: Report of the manufacturer:	N°
	- Information documents:	Pages 1, 2, 3, 4 & 5
3.	Autres documents annexés: Other documents annexed:	not applicable
4.	Date de délivrance de l'homologation initiale: Date of issue of initial type approval:	06.09.2006
5.	Date de la dernière délivrance de pages révisées: Date of last issue of revised pages:	not applicable
6.	Date de la dernière délivrance d'une homologation révisée: Date of last extension:	not applicable

E13*104R00*104R00*0001*00
Société Nationale de Certification et d'Homologation
L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011
Accréditation N° 5/001 (Portée communiquée sur demande)



TECHNICAL REPORT

No.: LCA 54 588 002 6

Inspection concerning the

APPROVAL OF RETRO-REFLECTIVE MARKINGS FOR HEAVY AND LONG VEHICLES AND THEIR TRAILERS

performed according to

ECE-Regulation No. 104

Type: **V-6700/B (METALIZED)**
Manufacturer: **AVERY DENNISON Reflective Products**
6565 W Howard St
Niles IL 60714 (USA)

Extension -- to ECE Type Approval no.: not applicable

Index:

1. General	Page 2
2. Inspections and their results	Page 3
3. Evaluation of test results	Page 4
4. Statement of compliance	Page 5
5. Annex (beginning with an index)	

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- Luxcontrol SA

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CCPL: LU80 1111 0581 9794 0000
BGLL: LU56 0030 1612 0727 0000
BCEE: LU95 0019 1100 7069 5000
TVA: LU 113 536 61
RC Lux.: n°B15664



1. **General**

1.1. **Test Provisions**

The inspection was carried out according to the requirements of the ECE-Regulation No. 104 including Supplement 2 to the 00 series of amendments which entered into force on December 10, 2002.

1.2. **Information concerning the vehicle type and the requested approval**

The statements below apply to the previous ECE type-approval as referred to on page 1.

1.2.1. **[] Numbering according to the communication concerning the approval following ECE-R104.**

Trade name or mark of the marking material:

AVERY DENNISON

[2.] Class of marking material: **C/D/E**

[3.] Name and address of manufacturer:

**AVERY DENNISON Reflective Products
6565 W Howard St
Niles IL 60714 (USA)**

If applicable, name and address of manufacturer's representative:

**PREALUX srl
Via A. Berlese, 1
I-24124 Bergamo (BG)**

[5.] Date on which the marking material was submitted for approval test:

25.07.2006

[9.] Remarks:

Not applicable



2. Inspections and their results

Version of the tested vehicle / technical unit / component

Following samples have been used for testing:

- device: V-6700/B (METALIZED)
- all described versions and variants

2.2. Inspection items

	Location of test:	Date of receipt of test item:	Date of test:	Inspector
Main report	I.N.R.I.M. Strada delle Cacce, 91 I-10135 Torino (I) SSOG Via G. Colombo, 79 I-20133 Milano (I)	25.07.2006	25.07.2006	P. Vinciarelli

Markings:

The trade name and other marks are in accordance with the requirements of item 4. of the regulation.

General specifications

The marking material is manufactured so that they function satisfactory and will continue to do so in normal use. It has no defect in design, which is detrimental to their efficient operation or to their maintenance.

The retro-reflective marking material is not to be easily dismantled.

The means of attachment of the marking material is fitted in a durable and stable way.

The retro-reflective marking material is easy to clean, as its surface does not exhibit any roughness or protuberances.

2.2.3. Special specifications

2.2.3.1. Shape and dimensions:

The shape and dimension of the retro-reflective marking material fulfil the requirements set in Annex 5 of the Regulation.

2.2.3.2. Colorimetric specifications:

The retro-reflective marking material can be white, red or yellow colour. Their chromaticity co-ordinates fulfil the requirements set in Annex 6 of the Regulation.



2.2.3.3 Photometric specifications:

The photometric specifications of the retro-reflective marking material fulfill the requirements of the minimum value for the coefficient of retro-reflection R' set in table 1 and table 2 of Annex 7 of the Regulation.

2.2.3.4. Resistance to external agents:

The specimen submitted to the tests for resistance to external agents fulfilled the requirements to resistance to weathering, to corrosion, to fuels, to cleaning, to penetration of water set in the Annex 8 of the Regulation satisfactory.

2.2.3.5. Resistance to heat:

The specimen submitted to the tests for resistance to heat showed no distortions or curvatures nor cracking after the test procedure set in the Annex 8 of the Regulation.

2.3. **Remark**

General

Inspection results are only applicable to items, which have been tested.

2.4. **Test facilities**

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the EEC-Directive and/or ECE-Regulation stated in 1.1. of this report and with ISO 17025.

Inspectors stated under 2.3. of this report were in charge of performing and/or evaluating the tests.

3. **Evaluation of test results**

Variants and components covered

The tests carried out cover the following variations of the marking material:

- **Retro-reflective marking material colours as stated in the information document**

3.2. **Remarks**

Main report:

Not applicable.



4. **Statement of compliance**

The inspections and measurements carried out have shown the compliance of the device described in this report and the attached Annex with the requirements of the ECE-Regulation No. 104 including Supplement 3 to the 00 series of amendments which entered into force on December 10, 2002.

Esch/Alzette, August 1st, 2006

Luxcontrol s.a.
Service Homologation-automobile

Patrizio Vinciarelli
Ingénieur-Inspecteur

Angelo Tomasini
Ingénieur-Inspecteur

Annex



*** LCA 54 588 002 6 * AVERY DENNISON * V-6700/B (METALIZED) * -- * R104 * Annex A,**

Index to the information package, including a summary in chronological order, concerning extensions and/or amendments

EEC type-approval No.: --

Main Report

Technical Report No.: LCA 54 588 002 6 Pages 1 to 5

Composition of the Annex:

A: Index Page 1

B: Information folder Pages 1 to 5

Index to the information folder:

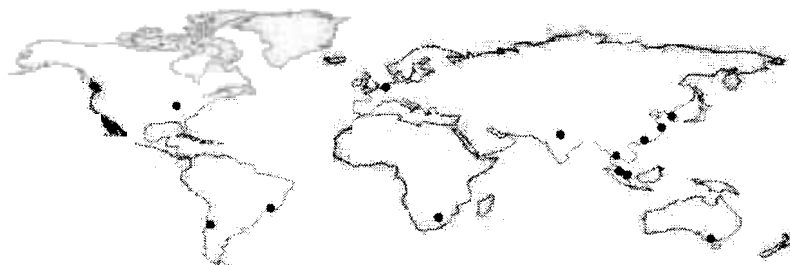
- Manufacturer's information document (pages 1 to 5)

AVERY DENNISON » REFLECTIVE PRODUCTS DIVISION

2004 Product Catalog



WORLD-WIDE LOCATIONS



Avery Dennison Reflective Products Division has established locations throughout our major markets to serve your account. We also are supported by a growing network of distributors. Please contact these main offices for your local contact:

NORTH AMERICA

Avery Dennison Reflective Products
6555 W Howard St
Niles IL 60714
1.800.327.5917 voice;
1.888.327.1434 fax

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Reflective Films Division

Avery Dennison® V-6700 B Metalized Conspicuity Tape

Prismatic Grade Conspicuity Tape for Vehicle Recognition
ECE 104/ Class "C"

Description:

Avery Dennison® V-6700 B Metalized Series Reflective tape is a high quality, durable, self adhesive, prismatic retroreflective tape. It is designed for use on vehicles for easy nighttime vehicle recognition. V-6700 B Metalized has greater angularity so that reflected light can be seen from a wider viewing angle for increased road safety.

Construction:

Face film:	Prismatic reflective film
Adhesive	Permanent, acrylic Pressure Sensitive
Liner:	Polymeric Film

Warranted Photometric Performance:

Minimum Coefficient of Retroreflection (R_A) ($cd / lx / m^2$) according to ECE 104/ Class "C"

Observation angle	Entrance Angle	White	Yellow	Red
0.33°	5°	450	300	120
	20°	/	/	60
	30°	200	130	30
	40°	90	75	10
	60°	16	10	/

Rem: Entrance angle is defined in C.I.E. notation by its β_2 component. β_1 & ϵ are held at 0°

Colors & Specification Limits (Daytime):

V-6700 B Metalized Conspicuity Tape will meet the color specifications set forth in ECE 104. These values are shown below

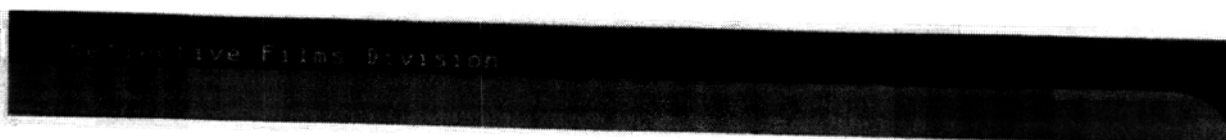
Color	1		2		3		4		Luminance(Y%)	
	x	y	x	y	x	y	x	y	Min	Max
White	0.300	0.270	0.385	0.355	0.345	0.395	0.260	0.310	25	--
	0.545	0.454	0.487	0.423	0.427	0.483	0.465	0.534	--	--
Red	0.690	0.310	0.595	0.315	0.569	0.341	0.655	0.345	3	--

The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with Standard Illuminant D65 (Geometry 45/0°)

Colors & Specification Limits (Night-Time):

V-6700 B Metalized Conspicuity Tape will meet the color specifications set forth in ECE 104. These values are shown below.

Color	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0.373	0.402	0.417	0.359	0.450	0.513	0.548	0.414
Yellow	0.585	0.385	0.610	0.390	0.520	0.480	0.505	0.465
Red	0.720	0.258	0.735	0.265	0.665	0.335	0.643	0.335



Other Specifications:

The following information on Physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. They are given without guaranty and do not constitute a warranty. The purchaser should independently determine, prior to use, the suitability of this material for his/her specific purpose. (Data represents averages and is not intended for use as a specification).

Physical Properties:

Outdoor Durability	Avery Dennison V-6700 B Metalized Conspicuity Tape is warranted 7 years when properly processed and applied (vertical exposure)
Minimum Surface & Ambient Air Application Temperature	18°C
Application Surface	Recommended for flat and simple curved surfaces only. V-6700 B metalized is designed for application to painted and non painted aluminum surfaces. All rivets and seams must be cut.
Service Temperature Range	-40°C a 82°C
Typical Film Caliper (w/adhesive)	433 µm to 450 µm
Shelf life	One year when stored at the following temperature and conditions: 20° - 25°C and 50% ± 5% R.H.
Other tests:	Meets or exceeds applicable requirements outlined for ECE-104, Class "C" materials including colour fastness, stability of photometric properties, resistance to weathering, corrosion, fuels, heat, cleaning and penetration of water.

Color & Size Configurations Available:

Color Availability:	V-6700 B Metalized White V-6701 B Metalized Yellow V-6708 B Metalized Red
Width:	50mm, wide edge-sealed rolls
Roll Length:	50 m

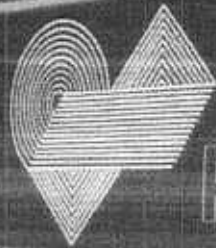
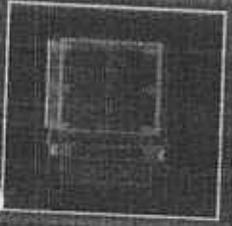
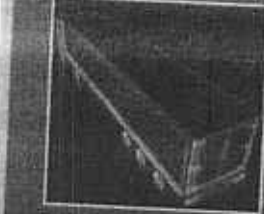
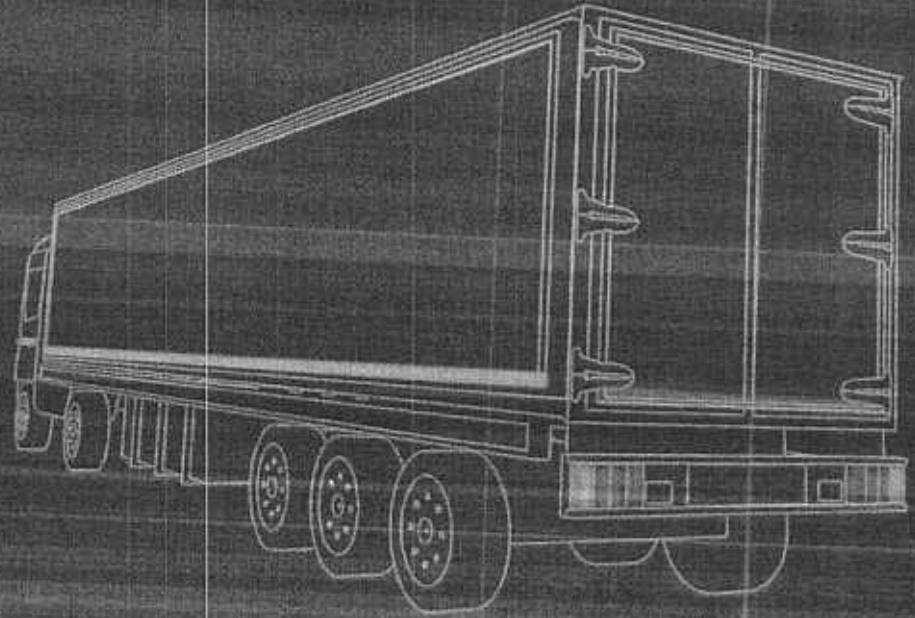
WARRANTY: All statements, technical information and recommendations about Avery Dennison products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of the products for its purposes. Avery Dennison products are warranted to be free from defects in material and workmanship for either one year (or the period stated on the specific product information literature in effect at time of delivery, if longer) from date of shipment if said product is properly stored and applied. It is expressly agreed and understood that Avery Dennison's sole obligation and Purchaser's exclusive remedy under this warranty, under any other warranty, expressed or implied or otherwise, shall be limited to repair or replacement of defective product without charge at Avery Dennison's plant or at the location of product (at Avery Dennison's election), or in the event replacement or repairs is not commercially practical, to Avery Dennison's issuing Purchaser a credit reasonable in light of the defect in the product. Avery Dennison's liability for defective products shall not exceed the purchase price paid therefore by Purchaser and in no event shall Avery Dennison be responsible for any incidental or consequential damages whether foreseeable or not, caused by defects in such product, whether such damage occurs or is discovered before or after replacement or credit, and whether or not such damage is caused by Avery Dennison's negligence. NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, OR OTHERWISE (EXCEPT AS TO TITLE), OTHER THAN THOSE EXPRESSLY SET FORTH ABOVE WHICH ARE MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, SHALL APPLY TO PRODUCTS SOLD BY AVERY DENNISON. AVERY DENNISON SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER SUCH WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING CONDITIONS SHALL BE VALID UNLESS MADE IN WRITING AND MANUALLY SIGNED BY AN OFFICER OF AVERY DENNISON.

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Re active ProdLJcts Division

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Société Nationale de Certification et d'Homologation
L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011 ■

MASSIMA VISIBILITA' PER LA MASSIMA SICUREZZA

BORDATURE RETRORIFLETTENTI PER MEZZI LUNGHY E PESANTI



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via ...