

Scotchlite™

Diamond Gradeä Conspicuity Marking for Soft Sided Vehicles Series 987

Description

Advantages

- Durable, microprismatic, retroreflective sheeting
- Available in rolls of 50mm widths, homologated according to UN/ECE Regulation 104
- For applications on soft sided vehicles
- Excellent angularity in both horizontal and vertical
- Easy to apply
- Up to 3 years exterior durability
- Sheeting resists fuel vapors or occasional spills

Application and Uses

3M™ Scotchlite™ Diamond Grade™ Conspicuity Marking for Curtain Sided Vehicles Series 987 is designed to mark the side and rear perimeter of trucks and trailers for enhanced visibility and detection.

Limitations of End Uses

We do not normally warrant other applications, but please contact us to discuss your needs or let us suggest other 3M products.

Product line

Property	Description
Number and color	987 -10 White
	-71 Yellow
	-72 Red

Characteristics

Property	Description
Adhesive color and type	Clear, Pressure Sensitive
Liner	Translucent
Premask tape	Translucent
Application substrates	3M approved canvas, not older than 6 months
Application temperature range for air and substrate	10°C to 30°C
Thickness without premask tape	0,36 - 0,4mm
Performance range	-34°C to +94°C

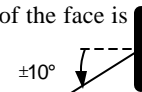
General Performance Characteristics

The durability of Marking Series 987 depends on the following:

- Selection, preparation and temperature of the substrate
- Application methods
- Cleaning and maintenance methods
- Exposure conditions

Warranted Durability

The sheeting is warranted for 36 months when used as vehicle marking and the exposure of the face is vertical at $90^\circ \pm 10^\circ$.



Customers right

In Europe 3M warrants for a period up to 36 months from date of application (concrete definition of the period is subject to the terms of sale) that Scotchlite™ Conspicuity Marking Series 987 sold by 3M to be used on 3M approved canvas for vehicle markings is free of defects in material and workmanship, subject to the following provisions:

If Scotchlite™ Conspicuity Marking Series 987 is processed and applied to a vertical $\pm 10^\circ$ surface in accordance with all 3M application and fabrication procedures provided in 3M's product and information bulletins, technical memos (which will be furnished to the agency upon request), including the exclusive use of 3M matched component systems and recommended application equipment; and

If the marking deteriorates due to natural causes; such as fading, cracking, peeling, lifting or discoloration; 3M's sole responsibility and purchaser's and user's exclusive remedy shall be that 3M will provide replacement of the 3M materials per the following table:

Total Warranty Period	Full Sheeting Replacement	Pro-Rata Sheeting Replacement	Monthly Reduction In Allowance
36 months	24 months	25 th -36 th month	1/12

Note: For the full product names of the 3M products listed on this page, please see page 1.

Conditions

Such failure must be solely the result of design or manufacturing defects in the Scotchlite™ series 987 marking and not of outside causes such as: improper fabrication, handling, maintenance or installation; use of application procedures not recommended by 3M; applied to a surface at greater than $\pm 10^\circ$ from vertical; failure of substrate; exposure to chemicals, abrasion and other mechanical damage; collisions, vandalism or malicious mischief.

3M reserves the right to determine the method of replacement.

Replacement sheeting will carry the unexpired warranty of the marking it replaces.

Claims made under this warranty will be honored only if 3M is notified of a failure within a reasonable time, reasonable information requested by 3M is provided and 3M is permitted to verify the cause of the failure.

Application

- Check the proper temperature using an Infrared-Thermometer like 3M™ Scotchtrak™ IR-500.
- Do not overlap sheeting
- Application underneath belts or buckles is not recommended.
- Remove premask tape after application using a 180° pull off angle.
- Allow the canvas to remain undisturbed for a minimum of 2 hrs after application
- Contact your 3M representative for detailed processing and application procedures

Maintenance and Cleaning

Hand wash with sponge, cloth, or soft brush using warm water and detergent. The cleaner must be wet, non-abrasive, without strong solvents and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). Rinse thoroughly.

To remove grease, oil, or tar, use cloth moistened with heptane, VM&P naphtha or mineral spirits. Wash with detergent and water and rinse thoroughly.

Using the high pressure hot steam cleaning the following conditions should be applied/ set up:

- maximum pressure 80 bar
- maximum temperature 60°C
- minimum of 30 cm distance of cleaning jet from sheeting surface
- cleaning wand to be held at no greater angle than 45 degree from perpendicular to the sheeting surface

Storage and Shelf Life

- Marking series 987 must be used within 1 year after date of receipt from 3M.
- Partially used rolls should be returned to the shipping carton or suspended horizontally from a rod or pipe through the core.
- Store the sheeting in a clean, dry area and away from direct sunlight.

Product Data

Retroreflection

At a 5° entrance angle and a 0.33° observation angle, Series 987 have the following typical coefficient of retroreflection. It is expressed in candlepower per lux per square meter [$\text{cd}/(\text{l}\times\text{m}^2)$].

The entrance angle is formed by a light beam striking the surface at a point and at a line that is perpendicular to the surface at the same point.

An observation angle is formed by the light beam striking the reflective surface and returning to the observer.

Sheeting and Color	Typical Coefficient of Retroreflection
987 -10 White	550
-71 Yellow	450
-72 Red	130

Chemical Resistance

- Resists mild acids, mild alkalis and salts
- Excellent water resistance
- Resists occasional fuel spills

Important Notice to Purchaser/ User

All statements, technical information and recommendations herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. We shall not be liable and no warranty shall apply for products not applied according to our published information folder.

Before using, user must determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. All questions of warranty and liability relating to this product are governed by the terms of the sale subject where applicable to the prevailing law.

3M Related Literature

Listed below is related 3M technical literature that may be of interest.

Subject	Bulletin No.
Instruction Bulletins	
Application Instructions for Scotchlite™ Diamond Grade™ Conspicuity Marking for Soft Sided Vehicles Series 987	987

For Further Assistance

For help on specific questions relating to 3M Scotchlite products, please contact your local 3M Technical service person or contact:



Commercial Graphics

3M Nederland B.V.

Industrieweg 24 - 2382 NW Zoeterwoude

Postbus 193 - 2300 AD Leiden

Tel. 071 -5450362 - Fax 071-5450378

e-mail: commgraphics.nl@mmm.com

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