



## Product Data Sheet

133 Frances Avenue, Cranston, Rhode Island 02910  
Phone # 401-467-3435 Fax # 401-467-8720  
Email: [retroglo@metlon.com](mailto:retroglo@metlon.com) Website: [www.metlon.com](http://www.metlon.com)

### METLON RETROGLO®

#### CHARACTERISTICS

Retroglo® has 50,000 minute glass beads to the square inch, reflecting light back to a light source, such as a car's headlights. The driver sitting behind the headlights immediately sees the reflected light and is alerted to the wearer ahead.

Retroglo® in clothing reflects light making the wearer highly visible at nighttime. Joggers, walkers, bicycle riders, highway workers, etc. are a few examples. Retroglo® can be woven, braided or knit into fabrics or into trim to be applied to fabric. In either use, Retroglo® provides nighttime safety without destroying the aesthetic appearance of the fabric.

#### COLORS

Silver

#### CONSTRUCTION

To add strength, 3M™ Scotchlite™ Reflective Film is laminated in wide rolls on either one or both sides of a polyester film. The wide rolls are slit to narrow widths to make Retroglo® yarns which have a rectangular cross section. The width, which has the retro reflective surface, is always wider than the thickness.

When wound on spools, the width lays flat, but Metlon is unable to control which side is up. During the process of slitting, Retroglo® may turn over and the opposite side will be up. This is particularly important to users of Retroglo® Style 2P1, which only has the retro reflective surface on one side, as they must find some way to keep the retro reflective surface up in their finished product. Many of our customers are able to control this and those who cannot, use two-sided Retroglo®.

During slitting, Metlon occasionally encounters end breaks. The only way which Metlon can fix end breaks is by putting knots into the material. As a result, customer may encounter knots in the slit spools of Retroglo®.

The slit edges of Retroglo® will tend to stick to one another under pressure. For this reason, spools of Retroglo® are wound softly. If it is necessary to rewind the Retroglo® onto braider bobbins, cones, beams, etc., it should be wound softly to avoid sticking and possible delamination during unwinding.

#### NONSUPPORTED STYLE

Standard widths 1/69", 1/32", 1/23". Other sizes slit to order.

Put up is on plastic spools

Style 2P1 - 3M™ 8710 laminated to one side of 2 mil clear polyester

Style 2P2 - 3M™ 8710 laminated to both sides of 2 mil clear polyester

Style 1P2 - 3M™ 8710 laminated to both sides of 1mil clear polyester

## **STRENGTH AND ELONGATION (Based on 2P2 1/69")**

Elongation: 35 - 40%

Breaking Strength: 250 grams

Yield Point: 15 - 20 grams

Note: Even though beads are in an elastic bond, excess stretching may loosen the bond.

## **COMPOSITION**

	<b><u>Style 2P1</u></b>	<b><u>Style 2P2</u></b>
Polyester	27.5%	16.0%
Glass Beads	50.5%	59.0%
Phenolic Resin	11.0%	12.5%
Urethane Adhesive	11.0%	12.5%

## **SHELF LIFE**

The components used to make Retroglo<sup>®</sup>, polyester film and 3M<sup>™</sup> 8710, have an indefinite life under ideal conditions. However, excessive exposure to a number of conditions such as wear, high heat, salt water, etc., will shorten life of Retroglo<sup>®</sup>.

## **DRY CLEANING AND LAUNDERING**

Professional dry cleaning should be done with perchlorethylene.

Laundering should be by hand or machine launder at less than 125 degrees F. Very hot water will weaken urethane adhesive bead bond. Avoid bleach or soaps containing bleach. Retroglo is not intended for industrial laundering, if required, 3M<sup>™</sup> 9910 Reflective should be used.

## **IRONING**

Treat like all synthetics and use lowest setting on iron.

## **WET PROCESSING**

Preferably dyed yarn construction should be used. Dyeing is not recommended because of high processing temperature. Bleaching will reduce yarn life.

## **AVOID**

Acetone and solvent type chemicals.

High heats over 300 degrees F. cause accelerated deterioration of bead bond.

## **NOTE**

Only limited tests have been run at this time and each user should conduct tests to determine the suitability of Retroglo<sup>®</sup> in their product.

**Retroglo<sup>®</sup>** is the registered trademark for Metlon's retro reflective yarn.  
3M<sup>™</sup> and Scotchlite<sup>™</sup> are trademarks of 3M company.

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