



133 Frances Avenue, Cranston, Rhode Island 02910-2299

Phone # 401-467-3435 Fax # 401-467-8720

Email: [retroгло@metlon.com](mailto:retroгло@metlon.com) Website: [www.metlon.com](http://www.metlon.com)

**Metlon Retroгло®**

## **CHARACTERISTICS**

Retroгло® yarn contains thousands of minute glass beads which reflect light back to a light source, such as a car's headlights. The driver sitting behind the headlights sees the reflected light, enhancing the nighttime visibility of the user. In many applications, Retroгло® yarn can be incorporated into products so that the yarn is not noticeable during the daytime. This gives you the ability to incorporate enhanced nighttime visibility into your products without affecting the aesthetics of your products.

## **APPLICATIONS**

Retroгло®, in the form that Metlon supplies it, has been used in the following applications:

As a warp yarn in decorative narrow woven ribbons and tapes that are sewn onto garments.

As a warp yarn in heavy woven webbings used for fall protection harnesses, pet leashes and collars.

It has been incorporated into both braided and woven shoe laces.

In decorative braids for garments, such as zipper pull cords, and pull cords for hoods.

In rope braids from very fine 1/8" diameter ropes used for tent flaps to very heavy climbing and fall protection ropes.

Retroгло® cannot be knit, or woven into broad goods, in the form that Metlon sells it. In order to use Retroгло® in these applications it is necessary to have it wrapped, twisted, or plied with other fibers. Metlon does not have the ability to do the wrapping, twisting or plying.

## **COLORS**

Silver

## **CONSTRUCTION**

3M™ Scotchlite™ Reflective Film is laminated in wide rolls on either one or both sides of a polyester film. The wide rolls are micro-slit to narrow widths to make Retroгло® 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, Retroгло® may turn over and the opposite side will be up. This is particularly important to users of Retroгло® Style 2P1 yarns, which only have 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 Retroгло®.

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

## **SIZES AND STYLES**

Standard products and widths are 2P2 1/69", 1/50", 1/32", 1/23", and 2P1 1/32". Other sizes can be slit to order. Minimums will apply.

Put up is on plastic spools.

Style 2P1 - 3M™ 8712 laminated to one side of 2 mil clear polyester

Style 2P2 - 3M™ 8712 laminated to both sides of 2 mil clear polyester

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

Elongation: 35-40%

Breaking Strength: 250-275 grams

Yield Point: 15-20 grams

## **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%

## **DRY CLEANING AND LAUNDERING**

Machine wash in cold water at temperatures less than 125 degrees F. Very hot water will weaken the urethane adhesive bead bond. Do not use bleach and avoid soaps containing bleach.

## **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. can cause accelerated deterioration of bead bond, and delamination.

## **NOTE**

Only limited tests have been run at this time and users should conduct tests to determine the suitability of Retroglo® in their product.

**Retroglo®** is the registered trademark for Metlon's retro reflective yarn.

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### TERMS AND CONDITIONS OF SALE

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Statements or recommendations not contained herein shall have no force or effect unless in an agreement signed by officers of seller and manufacturer.