

HVRO15 Fluorescent Red-Orange & HVLY15 Fluorescent Lime-Yellow

Description

High Visibility Reflective Trims are composed of wide angle, exposed retroreflective lenses bonded to 1½" textured polyester trim or approved equal. These retroreflective trims are designed to be sewn on to basic fabric materials such as cotton, polyester, and nylons. The product is available in two fluorescent colors with a ½" silver stripe bonded and sewn in center. High visibility reflective trims are lightweight, flexible, durable, and abrasion resistant designed to enhance the nighttime visibility of the wearer.

Reflective Brilliance

Nighttime Visibility by Reflected Light: These reflective trims will appear brilliant silver-white when viewed by a driver using vehicle headlights and remains highly reflective when viewed at entrance angles.

The coefficient of retroreflection (R_A) is measured by retroreflective intensity testing procedures:
ASTM E809 and E810 (R_A)

The following minimum R_A values may be used for specification or purchase description purposes:

Entrance Angle	Observation Angle	Typical R_A	Minimum R_A	Daytime Color (Stripe)	Reflected Color (Stripe)
-4.0°	0.2°	500	330	Silver	White
+5.0°	0.33°	330	250		

Fluorescent Textured Polyester Trim Specification

Warp yarn: 150 denier textured polyester, 2 ply yarn
 Filling yarn: 150 denier textured polyester, 2 ply yarn
 Picks/inch: 20
 Chromaticity: "x" incandescent light 0.61 average, daylight 0.58 average
 "y" all light sources = greater than 0.35
 Luminescence: "Y" all light sources = greater than 0.35
 Weave: 2 in 1 tail
 Washability: Home and Industrial wash (see Guidelines below) and dry
 Fastness: Minimum of a 4 rating AATCC test method 61 type 2A, 20 hours light fastness

The fluorescent colors are especially conspicuous under daytime conditions and particularly at dawn and dusk.

	Y	x	y
Fluorescent Lime-Yellow *			
White plaque	109.41	0.3586	0.5186
Black plaque	107.38	0.3577	0.5178
Fluorescent Red-Orange *			
White plaque	51.39	0.5547	0.3910
Black plaque	50.34	0.5521	0.3922

* Values based on single measurements



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Effective Performance Life

High visibility trims retain reflectivity for the normal use life of the garment to which they are applied. Performance can vary depending upon actual use, exposure conditions, and maintenance. Users should test the trims to satisfy conformance to their own requirements. High visibility reflective trims are resistant to contact temperatures from 500°F (260°C) to -19°F (-30°C).

Applications and Uses

High visibility reflective graphic trims are designed for use on a variety of fabrics to include: Cotton, Poly Cotton blends, and Fine to heavy Nylons. It is recommended that trims be tested when new materials or applications are involved. Some common uses are work wear shirts and pants; bag and pack accessories; caps; outwear jackets, safety harnesses and vests. While use of high visibility reflective trims enhances visibility, no reflective material can guarantee absolute visibility, particularly in adverse weather conditions.

Home Wash Guideline

Wash: For best retention of brightness, machine home wash warm 105°F (40°C)
Dry: Tumble Dry Low
Pressing: Use medium iron, 300°F (150°C).
Dry Clean: Dry-clean, normal cycle.

Industrial Wash Guideline

Wash chemistry: Lower pH and active alkalinity will increase the lifetime performance of the retroreflective material. Actual lifetime will be dependent upon the detergent system and dosage level. **Do not** use solvenated surfactants. **Do not** use detergents that contain free sodium hydroxide or potassium hydroxide. **Do not** use chlorine or perborate bleach. Detergent chemistry should not exceed 12 pH. Stain treatment wash processing will reduce reflectivity of the trim.

Maximum Wash Temperature: 75°C (167°F)

Detergents: Low to medium alkaline; high-surfactant detergents are preferred

Break/suds cycles: Less than 15 minutes total

Drying: Tunnel dry Maximum inlet temperature of 120°C (250°F)
Drying time not to exceed 7 minutes
Fabric temperature not to exceed 105°C (221°F)

Tumble dry Maximum exhaust temperature 90°C (195°F)

Pressing: Do not exceed 150°C (300°F)

Storage / Shelf Life

- Store rolled goods in a cool, dry area.
- Use within one year of receipt.

Limitation of Liability: Customer is responsible for determining if trim is appropriate for a specific purpose and method of application, including wash testing of applied product. Safe Reflections Inc. will not be liable for any damage or loss, whether directly or indirectly, from the use or application of this product.



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