

# Technical Sheet

## YSL VizLite™ 200

### Silver Reflective Material



#### Product Information

VizLite™ 200 Silver Reflective Material is intended for use in the PPE market for the inclusion in High Visibility Warning clothing such as EN471 and ANSI Jackets and Waistcoats to enhance visibility in low light and night time conditions.

#### Design Features

The fabric is constructed of a layer of microscopic retro reflective glass beads bonded onto a 65% Polyester / 35% Cotton fabric backing.

When a beam of light from an oncoming vehicle meets the material, the light reflects back to the light source and enhances the visibility of the wearer to the vehicle driver.

#### Product Performance and Certification

YSL VizLite™ 200 Silver Reflective Material meets and exceeds the following Specifications;

##### EN471:2003 and ANSI/ISEA 107-2004

This product is certified by Bureau Veritas CP in the United Kingdom to EN471 (High Visibility Clothing) and ANSI/ISEA 107 (High Visibility Safety Apparel) performance levels.

#### Retro-reflective Performance

YSL VizLite™ 200 Silver Reflective Material;

Meets and exceeds the levels of brightness required under EN 471 and ANSI /ISEA 107

- Is non-orientation sensitive
- Offers excellent feel and smoothness
- Is washable to 60°C Domestic wash up to 25 wash cycles

#### Product Application

Retro-Reflective warning garments are mainly used in environments where the wearer is working alongside vehicles. These garments improve visibility of the wearer and thus reduce the risk of being struck by a vehicle e.g. highways, railway lines, airports, warehouses, dockyards.

YSL VizLite™ 200 are recommended for use in Premium High Visibility garments where appearance is as important as performance.

YSL VizLite™ 200 reflective material is a durable material tested to wash a minimum of 25 washes in a domestic environment so is also suitable for non-occupational applications such as sports wear and clothing for cyclists, children, pets and pedestrians.

#### Product Usage

##### Cutting

Cuts should be made from the reflective surface and fabric should not be stacked more than 5 cm in height. Fabric is suitable for cutting by

- Hand (using very sharp cutting tools)
- Guillotine
- Die-cut

##### Recommended Fabrics

- Polyester or Polyester mix products either woven or knitted with a weight between 150 and 200g/m<sup>2</sup>
- Not suitable for stretchy fabrics such as Lycra or those containing Lycra as results can be poor.
- All substrate materials should be chosen based on suitability for intended use and laundry properties.



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#### Sewing

- YSL VizLite™ 200 can be applied direct to fabric panels before a garment is sewn together.
- Stitching should be at a distance of 2mm from the edge of reflective material to avoid fraying or curling of the reflective material.
- Where separate pieces of reflective material meet on a garment care should be taken to match the visible appearance.
- Any variations in appearance however will not affect the retro-reflective properties of the reflective material.

#### Stitching

- A double lock stitch with a maximum 5 stitches per cm is recommended.
- For substrates up to 250g/m<sup>2</sup> needle size NM80-90 is recommended.
- A Teflon™ coated needle and Pressure foot is recommended to enable a smooth fabric transition.
- Thread tension should be kept to a minimum.
- Tension on both upper and lower threads must be matched to ensure there is no puckering.
- Thread should be matched to the substrate. All threads should be shrink proof and be suitable for sewing at higher speeds.
- The guide on 2-Needle machines should be set at 1-2 mm above the width of the reflective fabric. This will decrease the chance of puckering caused by a difference in tension between the reflective fabric and the substrate.

#### Storage and shipping

- Rolls should be stored in the packaging they are supplied in.
- Cut pieces should be stored flat
- Opened rolls should either be stored in their original packaging or suspended by the use of a rod through the middle of the roll.
- YSL VizLite™ 200 should be stored in an area that is cool, dry and with low humidity.
- Precautions should be taken to protect the material from coming into contact with perspiration, strong acids, or compounds containing high levels of sulphur or chlorine. Contamination by these substances may affect the aesthetic appearance of the YSL VizLite™ 200 material.
- During Transportation and Shipping it is best to keep an ambient condition.

#### Handling

- YSL VizLite™ 200 should be handled carefully in hot and humid conditions.
- The area in which the materials are handled may need the need of cooling or dehumidifying equipment to keep the area cool and dry.
- Avoid the contamination of the product with dirt, grease or solvents as this could produce staining that will affect the retro-reflective qualities of the fabric.



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#### Wash and Care

YSL VizLite™ 200 is designed to be washed at 60°C in a Domestic wash, up to a minimum 25 cycles before the retro-reflective qualities are affected. However the following washing instructions should be closely followed;

- Do not pre-soak
- Do not use a pre-wash program
- Recommended wash program is for coloured clothing wash
- Do not wash at a higher temperature than 60°C
- Recommended wash Temperature is 30°C – 60°C
- Maximum Program time 50 minutes
- Maximum wash time at highest wash temperature 12 minutes
- Domestic washing powders for delicate and coloured fabrics are recommended

#### Stain removal

- The YSL VizLite™ 200 fabric should be tested for wash conditions before using the material. This can be achieved by mixing a solution of detergent and water and applying with a sponge or cloth to the material. For stain removal of grease or mineral oils, use a clean cloth dipped into white spirits. Wipe clean with water afterwards.
- Chemical splashes should be removed with a clean dry cloth.
- Neutralise splashes of strong acid or alkalise immediately with plenty of clean water
- Dispose any material that comes into contact with toxic or harmful substances in a safe and responsible manner.

Do not use the following types of products to clean/ treat stains on this garment;

- Heavy duty products or stain removal products with a high alkaline content.
- Micro-emulsions or high ph-products
- Bleaches
- Aromatic solvents

The use of the above will affect the lifespan of the retro-reflective material.

#### Ironing

- Iron on reverse of material if possible
- Iron using medium heat setting
- Do not use steam

#### Specialist cleaning and dry cleaning

- The YSL VizLite™ 200 fabric is not suitable for Industrial laundry methods
- The YSL VizLite™ 200 fabric is not suitable for dry cleaning up to 5 times.

#### Drying

- Line drying is the preferred method of drying.
- Do not dry in conditions exceeding 70°C.



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#### Maintenance Issues

The YSL VizLite™ 200 fabric retro reflective properties will be affected by any of the following treatments;

- Coatings or Spraying the garment with oils, protective waxes, paints or inks.
- Application of products such as leather spray or waxes.
- Harsh physical application of abrasive wire brushes or sand paper.

High Visibility Warning clothes should be inspected regularly and maintained in good condition.

Any signs of wear and tear may affect the performance of the garment in relation to EN 471 or ANSI/ISA.

If the performance of the retro reflective material falls below  $R' = 100 \text{ cd/lx/m}^2$  the garment should be replaced.

#### Product Disposal

The YSL VizLite™ 200 fabric can be disposed of on the garment. The product can be incinerated in a commercial or industrial facility or sent to a landfill site.

#### General Safety Information

##### Visibility Limits of YSL VizLite™ 200 fabric

There are various uncontrollable environmental factors that will affect visibility; these include smoke, hail, snow, mist, dust and fog. Fog, smoke, mist, and dust can all affect the dispersal of light from headlights and retro reflective performance.

The YSL VizLite™ 200 fabric is tested for performance during exposure to rainfall, and exceeds the requirements of EN 471 and ANSI/ISA. Brightness levels will return after the material dries out.

The retro-reflective qualities can also be diminished by the wearer depending on issues such as the line of sight, other equipment and obstacles in the working environment, and not wearing the garment fastened. The wearer should be aware of these limitations and take the necessary action.

#### Important notice to Purchaser / Converter / Wearer

Because of the unlimited variety of potential applications for products, BEFORE product use the converter and/ or product manufacturer must determine that the products are suitable for the intended use and are compatible with other component materials. The Purchaser is solely responsible for determining the proper amount and placement of products. While reflective products enhance visibility, no reflective product can ensure visibility on safety under all possible conditions. Neither Viz Reflectives or any Viz Reflectives authorised converter shall be liable for any incidental, special or consequential damages relating to the use or inability to use the products regardless of legal theory used.

