

DATASHEET RETROLITE

RTL 50 SHT FR IW

DESCRIPTION



RETROLITE RTL 50 SHT FR IW

HV reflective flame-retardant silver tape made of high reflective glass microspheres with constant and known refraction value, embedded in resin. The tape has a removable PU support film and a protective liner.

It is suitable for application on many different surfaces.

It is UNI EN 20471 certified as per certificate No. **CO 0824190042 - 00 - 01** issued by Centro Tessile Cottoniero e Abbigliamento Spa. It is also certified according to **OEKOTEX STANDARD 100 class II** and for 60 domestic washing cycles at 60°C according to ISO 6330 2A and 10 industrial washing cycles at 75°C.

It is a reflective film especially designed to:

- ✓ *increase the retro-reflection of the light on garments in low visibility conditions;*
- ✓ *find application on specialized flame retardant garments;*
- ✓ *stand high number of washing cycles*

TECHINICAL SPECIFICATIONS

- ✓ **Removable polyester film:** 140 Micron
- ✓ **Transferable film (microspheres and adhesive):** 150 Micron
- ✓ **PU based heat transfer tape**
- ✓ Glass Microspheres with constant refractive value: 1.93
- ✓ **Minimum Refraction:** >420 clx 12'/5"
- ✓ **Weight:** 350 gr/mq
- ✓ **Application settings:** 150°C-160°C per 10-15" according to the main fabric.

COLORIMETRY

Trichromatic coordinates: $x = 0.309$ $y = 0.326$ $\beta = 19.0$ (luminance factor)

REFRACTION * (Cd/lux m²)

	Light angle			
Observation angle	5°	20°	30°	40°
12'	569,2 – 572,4	562,6 – 562,4	561,2 – 559,6	475,4 – 462,2
20'	333,2 – 337,8	347,6 – 349,8	340,2 – 341,2	324 - 317
1°	53 – 53,8	54,5 – 52,4	54,3 – 53,4	52,5 – 46,2
1°30'	12 – 12,3	11,6 – 11,2	11,8 – 10,9	11,6 – 12,3

The retro-reflective properties of RETROLITE 50 SHT FR IW comply with the values required by EN 20471 (class II) as per certificate released by Centro Tessile Cotoniero e Abbigliamento Spa.

PRODUCT SPECIFIC RESISTANCES

RETROLITE RTL 50 SHT FR IW complies with the values required by:

1. Bending (ISO 7854/A 7500 cycles)
2. Cold bending (ISO 4675 -20°C)
3. Abrasion (UNI 530/2 5000 cycles)
4. ISO 6330 method 2 A - 60 domestic washing cycles at 60°C
5. ISO 15797 – 10 industrial washing cycles at 75°C
6. ISO 14116 – 2015
7. ISO 15614 - 2007
8. ISO 11612 – 2015
9. ISO 11611 – 2015
10. EN 469 – 2020
11. EN 1149 - 2018
12. Photometric Rain Performance Test (EN 471 Annex A)
13. Temperature variations 12 hours at 50°C – 20 hours at -30°C

PRODUCT WASH RESISTANCES

RETROLITE RTL 50 SHT FR IW complies with the values required by EN 20471 and the following norms in the table:

RTL 50 SHT FR IW		
NORM	WASHING CYCLES	DESCRIZIONE LAVAGGI
ISO 6330/2A	60	Domestic washing cycles at 60°C
ISO 15797	10	Industrial washing cycles at 75°C
ISO 3175	10	Dry cleaning cycles
ISO 14116	60	Limited flame spread
ISO 11612	60	Clothing to protect against heat and flame
ISO 15614	60	Wildland firefighting clothing
EN 469	60	Protective clothing for firefighting activities
EN 1149	60	Antistatic properties
AVAILABLE FORMATS		
WIDTH	RUNNING METERS	AVAILABILITY
H 50 mm	100 mt	✓
H 70 mm	100 mt	✓
Different widths	100 mt	On demand

Detergent: use only **ECE** detergent, **A** type, **without optical brighteners, perborates** or sanitizers such as “Napisan”

- ✓ Optical brighteners, perborates, other brighteners and disinfectants decrease RETROLITE 50 SHT FR IW performances.
- ✓ Do not use organic solvents, chlorine-based brighteners and strong alkaline substances (pH>8).
- ✓ Do not exceed the temperature of 60°C- 75 °C during the washing process.

DRYING CONDITIONS

- ✓ Air drying is recommended.
- ✓ TUMBLE DRY: do not exceed 80°C.

IRONING

Ironing: do not exceed temperature of 120 °C.

HOW TO USE

- ✓ Common application temperatures: 150°C-160°C per 10-15” at HIGH pressure, according to the main fabric.

CUSTOMIZATION

The product can be silk-printed using vinyl-based ink or other different ones and it can be digital printed, too.

In both cases, printing process can take place after the application of the transfer film on the fabric.

Washing tests need to be run to prove the correct behaviour of the inks adopted, before and after the application.

FURTHER INFORMATION

- ✓ Before starting the production make sure to run application tests to verify the correct compatibility between the film and the main fabric and to select the best application settings.
- ✓ This film is suitable for the application on many different surfaces (Cotton, Polyester, PVC etc). Waterproof treatments or other specific treatments on the fabric may require special application

settings to guarantee this film performances. It is advised to run some application test before starting the production.

- ✓ For fabrics that have very special treatments, it may be necessary to press the fabric twice, making sure that the protective liner has been removed. It may be useful to use a silicone paper with the silicon side facing the film, between the heated plate and the reflective tape.
- ✓ The product must be stocked in a dry environment with a temperature between 15°C and 30°C and far away from heat sources and direct light. The product must be used within one year from the delivery.
- ✓ The product is supplied in 100 running meters reels +/- 0,5mt, from 2cm up to 50,5 cm width.

For further information, please contact IRE S.r.l.

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