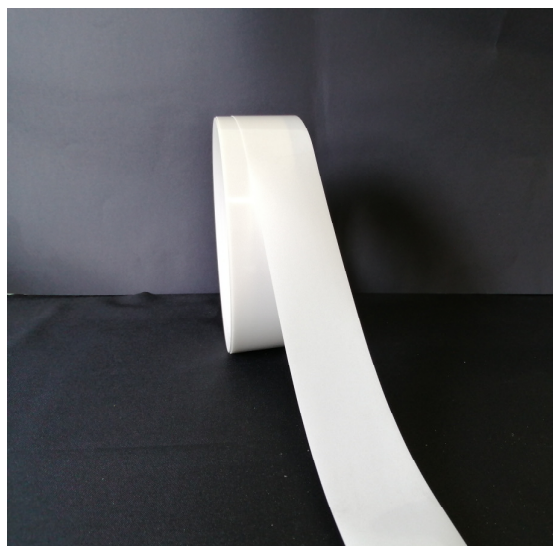


## GENERAL CHARACTERISTICS



The product basically consists of microbeads having known reflective index and extremely high refraction power, applied on a thermoadhesive by means of a polyurethane binder with high flexibility and resistance to mechanical and chemical-physical stresses.

RETROLUX TT 100 is a reflective thermotransfer designed for:

- Improve the daytime and nighttime visibility of the garments
- offer a high resistance of the clothing to repeated domestic washings

## PRODUCT COMPOSITION

Front coating: Glass microspheres with constant reflective power  
Binder: Aliphatic polyurethane resin.  
Thermoadhesive: Co- polyester base.

## COLORIMETRY

Cromaticity coordinates (white colour):  $x = 0.3335$   $y = 0.3510$   $Y = 55.3$  (luminance factor)

## COEFFICIENT OF RETROREFLECTION\* (Cd/lux.m<sup>2</sup>)

Observation Angle	Entrance Angle			
	5°	20°	30°	40°
12'	80-81	85-86	68-69	45-47
20'	59-62	62-63	55-56	38-39
1°	8.2-8.4	8.5-8.7	9.4-9.5	10.6-10.8
1° 30'	4.1-4.2	3.7-3.8	3.8-3.9	3.2-3.3

\*The values were obtained from an average of various sets of samples. Reflected colour: white.

**The white reflective fabric called RETROLUX TT 100 satisfies all the minimum requirements accordingly Italian Official Gazette (Ministerial Decree dated 09<sup>th</sup> June 1995).**

## **PHYSICAL PERFORMANCE**

RETROLUX TT 100 meet or exceed the minimum reflective values after the following test:

1. Flexing (ISO 7854/A 7500 cycles)
2. Cold Fold (ISO 4675 -20°C)
3. Abrasion (UNI 530/2 5000 cycles)
4. Temperature variance (12 hours at 50°C, 20 hours at -30°C)
5. Rainfall test (Annex A)

## **WASHING PERFORMANCES**

RETROLUX TT 100 exceed the minimum reflective values after:

**25 cycles** at 60°C (ISO 6330 )

**25 cycles** of dry cleaning (ISO 3175-method 9.1)

### **Wash guideline**



**Minimum temperature: 30 °C**

**Maximum temperature: 62 °C**

**Detergent:** Use only **ECE type A** without perborates

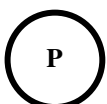


- Optical brightness, perborates or additional bleaches, reduces washing performances of Retrolux TT 100.
- Do not use organic solvents, chlorine bleaches and alkaline products (pH>8).
- Do not exceed 62°C during wash

### **Drying Conditions**

- **Air drying is recommended**

### **Dry cleaning**



Use pure Perchloroethylene

### **ADDITIONAL INFORMATION**

The material is supplied in rolls of 50 linear meters length and in all widths from 1 cm till 1 meter. The cut tolerance is  $\pm 1.5$  mm.

The thermotransfers of the Retrolux series can be cut with cutting plotters, with dies and with laser.

For the kiss cut, we recommend to make a specific machine adjustment with preliminary tests on the Retrolux reflective transfer, to avoid problems of removing the scraps or dragging the reflective part in the removal of the scraps.

#### **IRONING:**

Use cool IRON (110°C)



### **NOTICE TO USERS**

#### **APPLICATION**

**RETROLUX TT 100 HAVE GOOD ADHESION TO VARIOUS TYPES OF SUBSTRATES SUCH AS POLYESTER, COTTON, RUBBER, PVC, LEATHER ETC. WATER REPELLENT OR WATERPROOF FINISHES ON THE SUBSTRATE MAY REDUCE THE THERMAL BONDING STRENGTH.**

#### **CONDITIONS OF APPLICATION**

**TEMPERATURE: 150 - 155°C**

**HEATING TIME: 12-15 seconds**

**PRESSURE: 3 BAR**

#### **NOTES:**

The parameters stated above are obtained from internal tests performed on some common types of substrates (polyester/cotton).

The pressure to be used and the heating time are **strictly dependant on the type of plant used and the substrate** on which RETROLUX TT 100 must be applied.

BEFORE HOT MELTING **RETROLUX TT 100** ON ANY TYPE OF SURFACE PRELIMINARY TESTS MUST BE CONDUCTED TO DETERMINE THE OPTIMUM CONDITIONS OF BONDING. Lamination method roll to roll with heated calenders, may require completely different conditions than those above mentioned.

### **PRINTABILITY**

The product correctly transferred and in any case without the front liner, can be printed using inks suitable for polyester or other inks, carrying out preliminary adhesion tests. We recommend the application of the ink with screen printing technique, good results have been obtained with digital printing with ecosolvent inks. The correct adhesion of the inks must also be verified by subjecting the printed product to repeated washing.

### **STORAGE**

Retrolux reflective transfer must be stored in a cool and dry area, we recommend temperatures between 15 and 25 °C and relative humidity less than 70%. Retrolux reflective transfer must be stored in their original box and used within 1 year of receipt.

**FOR FURTHER INFORMATION CONTACT IRC S.p.A - Italy**

Laboratory Manager