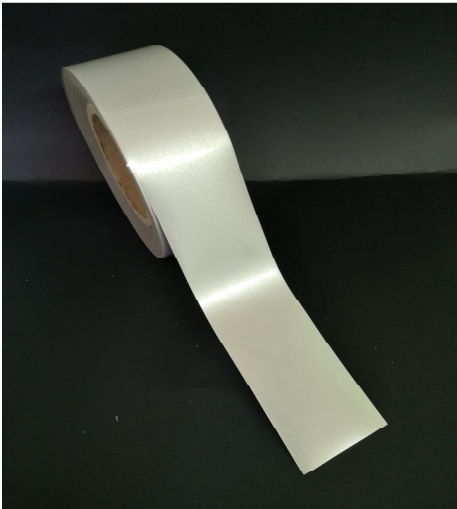


GENERAL CHARACTERISTICS

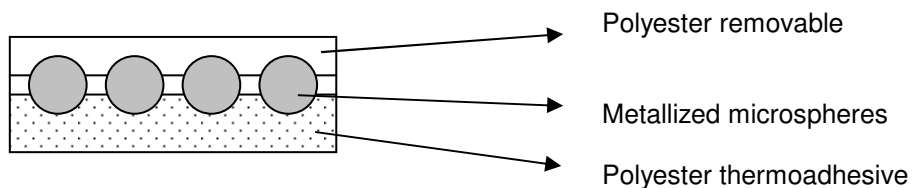


The product basically consists of metallised microspheres having known reflective index and extremely high refraction power, partially incorporated in a removable polyester (front layer) and permanently bonded to a thermoadhesive (backing layer). The thermoadhesive polyester base provide excellent adhesion to the most common type of fabric, with high flexibility characteristics for a higher resistance to the finished product.

RETROLUX Super TT 1000 IW is a reflective thermotransfer designed for:

- offer a high resistance of the garment to repeated industrial washings
- improve the retro-reflection on clothing in conditions of poor visibility

PRODUCT SCHEME



Total thickness: 230-250 Micron
Reflective layer thickness: 150-165 Micron
Front layer: Polyester
Back layer: Polyester

COEFFICIENT OF RETROREFLECTION* (Cd/lux.m²)

Observation Angle	Entrance Angle			
	5°	20°	30°	40°
12'	535-560	542-551	374-403	176-208
20'	330-360	338-366	300-316	159-201
1°	29-38	28-32	22-29	26-39
1° 30'	13-18	10-15	13-21	8-9

*The values were obtained from an average of various sets of samples. The values refer to the product after full transfer and may be slightly modified if the transfer does not take place in optimum conditions. In all cases, the parameters should be considered as a guideline and the user is responsible for their checking and optimizing.

RETROLUX SUPER TT 1000 IW satisfies all the minimum requirements accordingly EN 20471 Norm

PHYSICAL PERFORMANCE

RETROLUX SUPER TT 1000 IW 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 SUPER TT 1000 IW exceed the minimum reflective values after:

50 industrial washing cycles method ISO 15797

30 cycles at 90 °C (ISO 6330)

100 cycles at 60 °C (ISO 6330)

65 cycles of dry cleaning (ISO 3175-method 9.1)

Wash guideline



Minimum temperature: 30 °C

Maximum temperature: 95 °C

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

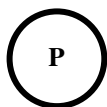


- Optical brightness, perborates or additional bleaches, reduces washing performances of Retrolux SUPER TT 1000 IW
- Do not use organic solvents, chlorine bleaches and alkaline products (pH>8).
- Do not exceed 95 °C during wash
- Do not exceed 120 °C during drying

Drying Conditions

- Air drying is recommended
- TUMBLE DRY: NOT EXCEED 90 °C
- TUNNEL DRY: 100 °C is recommended, not exceed 120 °C.

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 ± 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 SUPER TT 1000 IW 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 SUPER TT 500 must be applied.

BEFORE HOT MELTING **RETROLUX SUPER TT 1000 IW** 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 then 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