

PARÀ TEMPOTEST®

ACRYLIC MARINE, AWNING AND “HOME” INDOOR/OUTDOOR FABRICS

The whole point of an exterior shading and decorative fabric is that it performs well in all weather conditions, and keeps its good looks for a long time. Indeed these fabrics are highly technical, and not all exterior fabrics are the same!

It needs to be stable and strong for awnings, soft and sewable for soft furnishing and upholstery, waterproof for marine; and above all an exterior fabric needs to be highly resistant to the aggressive degradation caused by UV light which attacks the colour and the fabric itself. The best answer for all these conditions is Tempotest solution-dyed “outdoor” modified acrylic. It’s designed to be perfectly suitable for life outdoors, and indoors too.

Technology 1 FIBRE PRODUCTION - The birth of the textile



Parà only uses 100% TEMPOTEST OUTDOOR solution dyed fibre made by Europe’s largest and most reliable man-made fibre producer. Solution dyeing technology means that when the basic ingredients of this man-made fibre are created, the colour is added at its first stage of production, resulting in a permanent change at molecular level. Using this specialised “outdoor” fibre means that the COLOUR IS PERMANENTLY BUILT IN FROM BIRTH - simply “The colour of the fibre becomes the colour of the yarn which becomes the colour of the fabric”. Not only that, during the acrylic substance manufacture, the molecular structure is changed to reduce the level of oxygen. This in turn restricts the growth of mould, again engineering it to be a truly durable fabric.

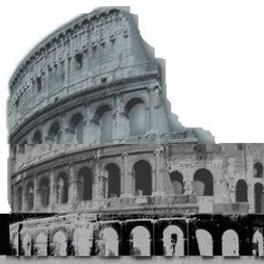
Technology 2 SPINNING - Converting the fibre into a yarn

Fibre resembles coloured fluffy cotton wool. This needs to be transformed into a yarn that can later be woven into fabric. The transformation process takes the fluffy fibre - that has no strength or direction - and teases it out into a straight line that (in its early stages) looks like a coloured wadding. The wadding is gathered and stretched into a “rope” (called a roving) with a diameter of around 7cm. At this stage, the fibres begin to align, but still have very little strength. The roving is passed into more machines that twist and pull it into a thinner rope that begins to have some strength and direction. The fibres align themselves and this produces “mechanical bonding” that is caused by surface tension. More machines take the yarn and twist and pull it further so that the individual fibres are fully aligned and united into a strong and perfect yarn. Yarn needs to be strong, the correct thickness (the “count” of the yarn), and “level”. This means that the thickness must not vary, otherwise the resultant woven fabric will look “slubby”, which may be perfectly acceptable or even required for a soft furnishing fabric, but a technical fabric for marine or awning use needs to be absolutely “square”, as will be described in more detail below. After the final spinning machine, Parà’s yarn is tightly spun, strong but not brittle, elastic but not stretchy, level, and at the correct count. The yarn is transferred to large cones that are packed carefully and sent to the weaving plant where it is made into cloth. The yarn is already coloured because it contains only pre-coloured fibre.



Unlike our competitors, Parà has its own acrylic spinning plant (Filatura Lenna near Brescia) that spins around 15,000 kilos of Tempotest® acrylic fibre per day. If all the cones of yarn from 6 days production were unwound, the yarn would go all the way to the moon and back! The fibre itself is tested, and every stage of spinning is checked stringently. This results in a better fabric that lasts longer, with almost zero consumer complaints and therefore vastly increased consumer and customer loyalty.

Parà



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Consistent quality and supply is assured, even at the height of the season. Parà holds at least one month's supply of yarn ready to weave according to market demand. That means, whenever you need it, Parà will make it, fast. Short lead-times mean greater flexibility and cost effectiveness.

Technology 3 TESTING - Why Tempotest is better

All Tempotest fabrics by Parà are made from top quality, specially modified fibre. The inherent resistance to UV and mould is an enormous benefit to the finished fabric that outperforms most others in the market. Many companies who use olefin, polypropylene and polyester, make claims as to their fabric's colourfastness to light. The BEST way to make a fabric colourfast to light is to make it from solution-dyed fibre. So, piece-dyed or yarn-dyed fabrics can be rejected. Moreover, the UV can actually destroy the strength of a fibre itself, simply by making it brittle. Only modified "outdoor" fibres can resist this.



The fibre needs to resist rot too. Humidity promotes mould growth. Mould can grow between the fibres of a fabric, and actually eat into the fibre first staining it permanently, then degrading it further. Oxygen is part of this process, hence the modification of Tempotest outdoor acrylic fibre which reduces oxygen levels and so restricts mould growth.

This can be proved easily. The test for colourfastness to light is BS EN ISO 105-B02, where a sample is exposed to a UV light source and graded 1 to 8, with 1 being worst, and 8 showing no difference between the exposed sample and the original unexposed sample. This test mimics exposure to the sun, and the normal standard represents 1500 hours of exposure. There is a more aggressive test that mimics weather instead of just sunshine. This is BS EN 105-B04. The difference is that during the exposure cycle, the sample is sprayed every 30 minutes with water at 60C. This is designed to represent long-term rain and sun which would promote mould growth. Again, the grading is 1 to 8.

PARÀ'S TEMPOTEST SOLUTION-DYED OUTDOOR MODIFIED FABRICS ACHIEVE GRADE 7 TO 8, AND ARE TESTED FOR 2000 HOURS (not just 1500 hours) TO BS EN 105 - B04

Technology 4 CLOTH PRODUCTION - Making the cloth and making it work



The first stage of any weaving production is "beaming" where the warp (vertical yarn set) is wound onto a giant spool. This is done by placing thousands of cones of yarn on a rack called a "creel" and placing each yarn carefully so that it is in exactly the right location on the beam. This is how a perfectly regular stripe effect is made. Parà has 7 beaming machines for great capacity and flexibility.



Once the beam is full, it is taken to one of Parà's ultra-modern "airjet" looms where a weft (horizontal yarn) is woven across it. This critical process makes a cloth that needs to be strong and slightly elastic. Only the highest quality yarns ensure this. The "loomstate" fabric is then washed to remove any lubricants and impurities, and is then ready for further processes, depending on requirements.

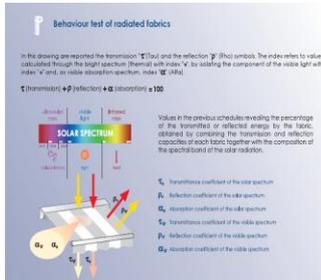


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Outdoor acrylic cloths may be coated with anti-fungal and mould resistant chemicals, and a soil-resistant finish like Teflon®. Parà has worked alongside DuPont and has created a special formulation of stain-resistant finish called Teflon® EXTREME. This is a nano-particle coating that attaches itself to the fibres at a sub-microscopic level. This protects our awning ranges from most atmospheric conditions. Waterproof coatings may also be used, as in the Tempotest® Resinato awning collection, and Malmoe marine series.

After weaving and coating, the acrylic fabric is “heat-set” in a giant oven and cooled rapidly to keep the warp perfectly vertical, and the weft perfectly horizontal, thus making a square cloth that is not only strong in both warp and weft directions, but slightly elastic too. This means that the fabric is perfectly suited to high tension structures like awnings and covers.

TEMPOTEST® FABRICS AND ULTRA-VIOLET LIGHT SAFETY



The complete collection of TEMPOTEST® awning fabrics has been tested for absorption and reflection of UV rays, shading from visible light, and heat transfer of infra-red radiation. Tests were made at Milan University and tabulated. A chart of results makes selection easy for customers. This forms part of a wall-chart showing the full range and recommended use depending on skin typology and design criteria. Now one may sunbathe under a comfortable and shaded UV resistant fabric that looks great and protects at the same time. Now, with the ecological impact of the sun and the green issues associated with it, a Tempotest awning can help reduce fuel costs and therefore a home's carbon footprint. Simply, the shade provided by the awning reduces the need for air conditioning and the electricity for it.

THE TEMPOTEST® RANGE

Parà's enormous acrylic collection is designed and manufactured for all exterior applications including awnings and Dutch Blinds, garden furniture, marine, camping and leisure etc. Parà has a collection of cloths specifically for garden umbrellas (TEMPOTEST® OMBRELLONI), extreme weathers and waterproof (TEMPOTEST® MARINE), as well as coated waterproof and printed fabrics (TEMPOTEST® RESINATO); and light-weight but strong polyester and acrylic T-TEX for tents. Each fabric in the Tempotest® range is designed for its particular purpose, whether the requirement is for waterproof, soft and drapy, stiff and resilient, or in special widths. Importantly, being made of solution-dyed acrylic, the fabric is GUARANTEED 8 YEARS against colour fading (unless abused!).

NEW DEVELOPMENTS - TEMPOTEST® “HOME” - INDOOR/OUTDOOR

There is a new requirement for indoor/outdoor fabrics that share the advantages of beautiful interior décor, where design, drape and washability are foremost requirements; and exterior fabrics where colourfastness to light is the most sought-after attribute. With Parà's vast experience in both areas, they have made the ideal combination of all the best characteristics and made a 100% solution-dyed acrylic fibre fabric that is soft, drapeable and resilient. TEMPOTEST® HOME has many uses... napery, roller blinds, Roman blinds, curtains, upholstery, trimmings, garden furniture, hammocks, parasols, garden umbrellas etc.

The TAILOR-MADE facility allows clients to co-design fabrics with small minimum order quantities and great flexibility. Now, using the latest dye-sublimation techniques, Parà offers DIGITAL PRINTING on TempotestSTAR, outdoor modified solution-dyed polyester that is soft and easy to clean, with grade 6 results, a perfect combination of technology and usage.

Tempotest® - a fabric for all seasons and reasons.



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