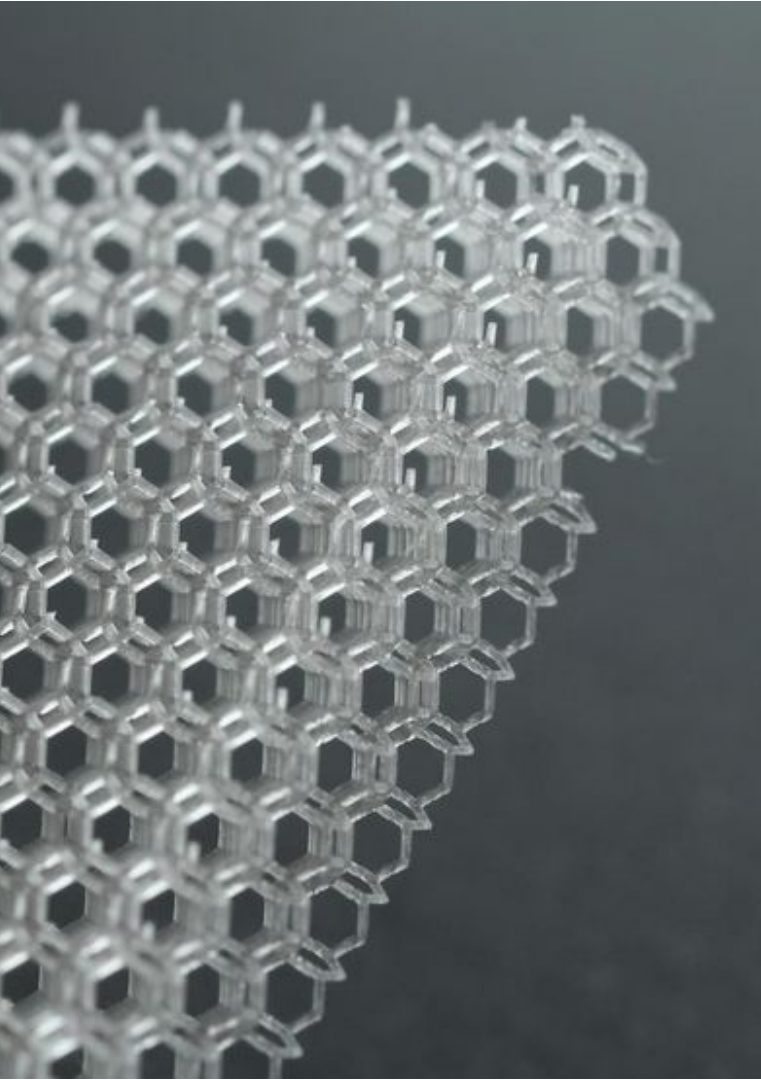


ICT - TEX

3D Knit

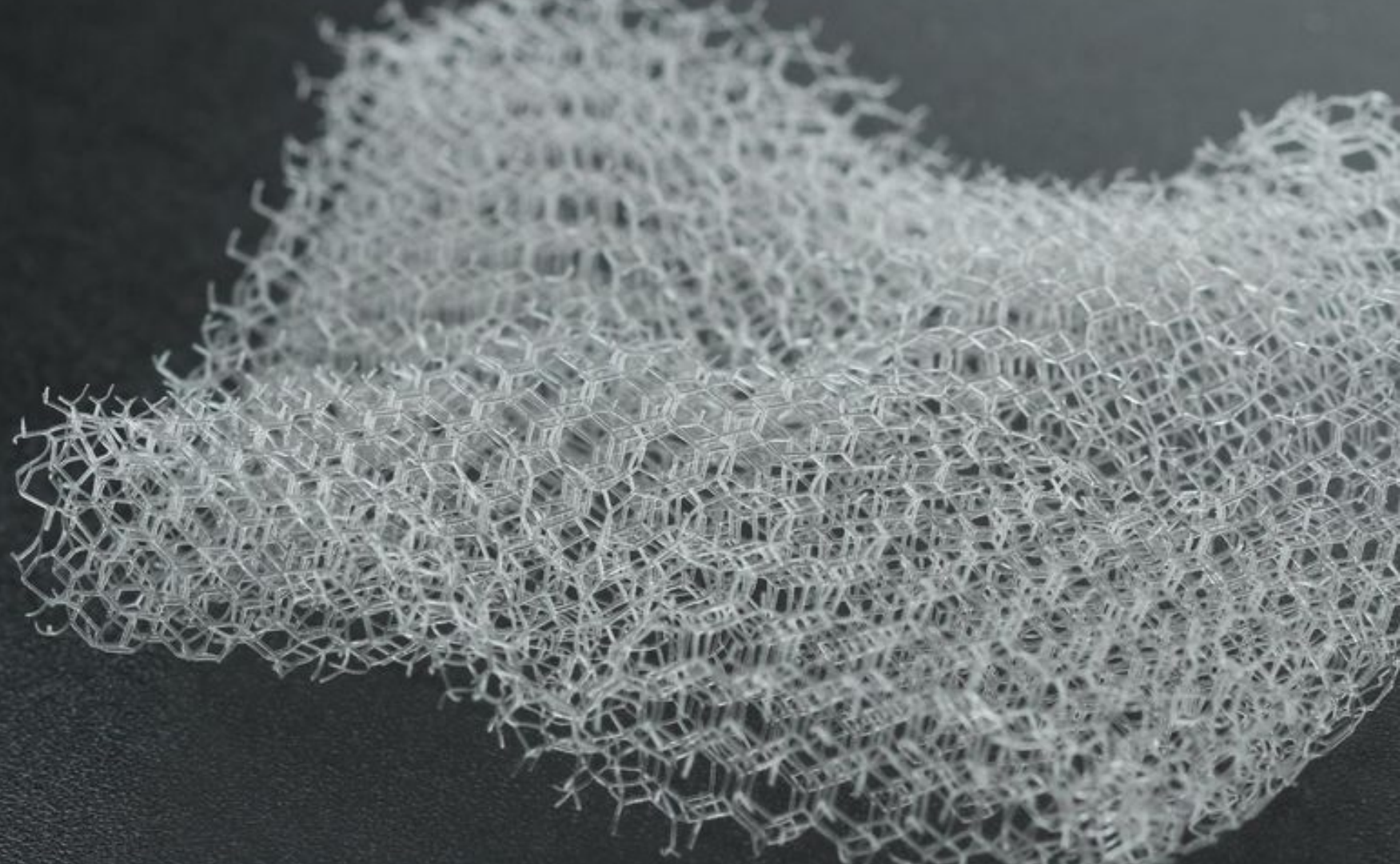


Made-to-Order Interlaced Textile and Spacer Yardage

Digital manufacturing platform for on-demand production of various consumer products with extremely precise geometries and structures, enabling engineered performance at scale through unique lightweight and resilient designs. It uses multiple technologies including optical lithography, computational optimization, and proprietary polymer processing to independently manipulate each strand of fiber down to a 25-micron width with high precision and efficiency. The proprietary roll-to-roll technology can create functional materials based on organic structures that were previously impossible to manufacture using traditional methods. The company currently features 3 cured photopolymer (polyether urethane) resins: GM-S-385, MBF-3, and MBF-5 that can be used for a variety of applications based on the strength, flexibility, and thermal resistance requirements. These resins are made with 31-53% bio-content, derived from Conifer and corn, and come in a hardness range of Shore D63 to D76. Applications are for apparel accessories, interiors, soft goods, footwear, packaging, toys and games, medical, and automotive.

OPT Industries

85 Hicks Ave, USA





Delta™

A patent-pending knit construction specifically designed for advanced control of moisture dispersal in apparel. The fabric uses hydrophobic and hydrophilic yarns knitted in a radiating pattern to form a 3D structure. The hydrophobic yarns channel the sweat, while the hydrophilic yarns hold on to it. When the outer material layers lengthen dramatically more than the inner layer material, for example, greater space opens up between the layers to serve as a breathable area. This juxtaposition of materials with significantly different thermal reactions requires no action or reaction by the person wearing the clothing. The current fabric design almost triples its cooling ability with a 27 °F drop in temperature. It works more efficiently by elevating touchpoints for increased airflow, faster moisture dispersal, odor control, and reduced wet cling. The company has developed two versions of the fabric: a technical fabric and a more casual-looking pique fabric. The material is available in at least 50% recycled PET. Applications are for apparel.

POLARTEC®

300 Brickstone Square, USA

www.polartec.com





Fully-integrated knitted net pocket

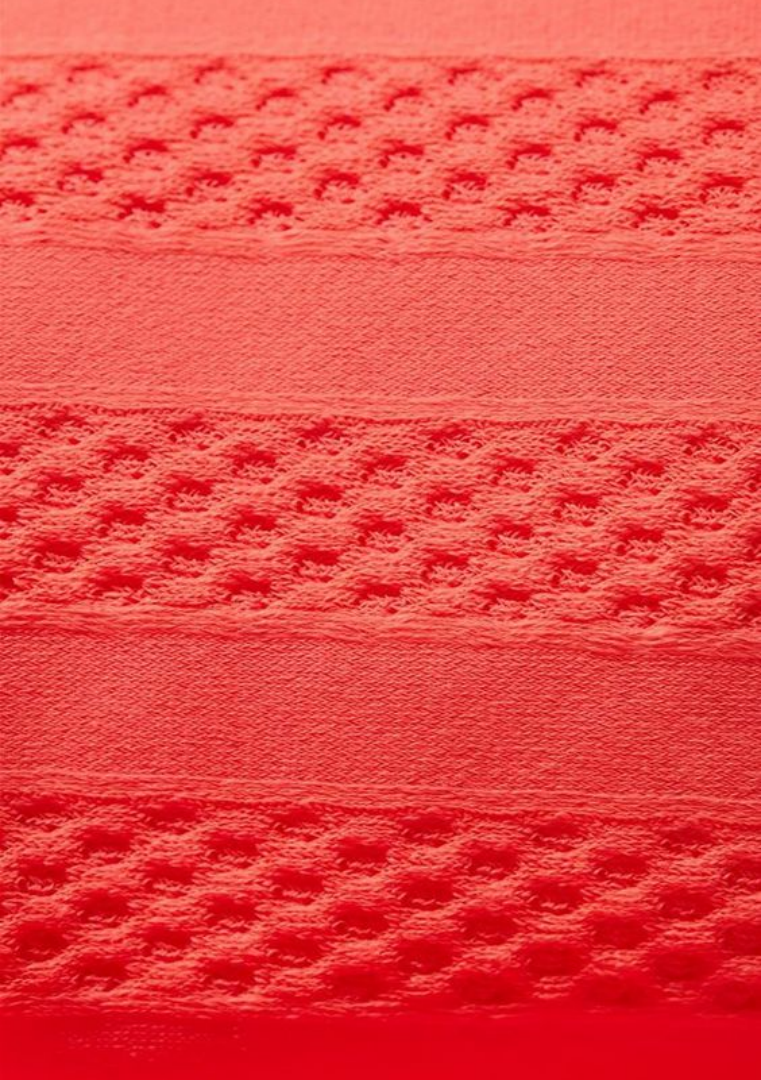
A 3D knitting process that uses the Stoll ADF machine to its optimum including 16 feeders simultaneously, 50 cones of 150 denier yarn simultaneously, shaping, intarsia, and transferring at high speed. Stoll is a company that has successfully produced knitting machines and pattern preparation systems and software over many generations. Stoll's ADF is a 7.2/14 gauge knitting machinery. Knitted fabrics produced using this process can either be shaped or flat. Polyester yarn is typically used and samples can be made within 17 minutes for shaped versions and 11 minutes for flat versions. Up to 5 colors and 8 color combinations can be achieved by mixing the yarn on the machine in 4 vertical positions to create a random look. Each vertical position can be a different color or color combination. The maximum width at this time is based on the width of the machine at 20 in (50 cm); however, there is no limit to the length the machine can knit and the maximum length that can be achieved will depend on the density of the yarn used. Applications include seating applications, window coverings, apparel, shoes, accessories, and sporting equipment. This process was used to create the fully-integrated knitted net pocket used in Warrior®-brand lacrosse stick baskets. The 3D knitted nets are said to provide an accurate feel and control in the throat, pocket, and head.

Fabdesigns Inc

327 Latigo Canyon Road Malibu , USA

www.fabdesigns.com





DHE-362

Jacquard tricot knit fabric that combines a 4-way stretch with a 3D texture that goes from opaque to translucent when stretched. This circular knit textile comprises 80% nylon and 20% spandex, has claimed good moisture management through quick absorbing and drying, and is piece-dyed to color. It is available in a 190 gsm (5.6 osy) weight in a standard color of neon orange. The textile is knit 44 in (112 cm) wide and can be customized by color with a minimum order of 1000 yds (914 m) or with a different inner face pattern. It can comply with OEKO-TEX® Standard 100. Applications are for athletic and fashion apparel.

Donghwa Textile Co., LTD.

261 West 35th St., Room 604, USA

donghwatextile.com





Movement x Cushioning x Beauty

A 3D knitted textile made with a special construction to support a wearer's active lifestyle. Made with industrial seamless knitting machinery from Santoni Shanghai, the final textile delivers functional benefits including movement, compression, and cushioning. The yarns and fibers used to create the textile are a mixture of TENCEL™, merino from Südwohle, polypropylene (PP), and LYCRA® to offer additional benefits such as moisture-management, thermal comfort, and soft touch. The elasticity and design pattern of the textile acts as a second skin by stretching and bending with the body. The elasticity can also offer compression to support increased muscle awareness, enhanced blood and oxygen circulation, reduced time for muscle repair, and stabilized joints for reducing injuries. The gradient pattern of the textile is built in from both a horizontal and vertical perspective to create different levels of cushioning, engineered movement, and a visual dynamic. Custom colors and design are available upon request. Applications include apparel, footwear, and gloves.

Studio Eva x Carola

Hagedoornplein 24, Amsterdam

www.evaxcarola.com





3D Jacquard (PCJ-3021-6)

Knit fabric that combines a two-faced construction with stretch and a 3D texture. This circular knit textile is a combination of 95% polyester (PET) and 4% spandex (TPU), the jacquard process enabling the production of two different formats. An inner fine denier liner is knit with an outer coarser denier face in a diamond pattern that pulls the outer face into a slight ruched texture. The fabric has 4-way stretch, has claimed good moisture management and is piece-dyed to color. It is available in a 325 gsm (10 osy) weight in a standard color of gray. The textile is knit 48 in (122 cm) wide and can be customized by color with a minimum order of 500 yds (457 m) or with a reflective print pattern. It complies with OEKO-TEX® Standard 100, is bluesign® approved and the company complies with the environmental standard ISO 14001. Applications are for athletic and fashion apparel.

Men-Chuen Fibre Industry Co., LTD.

10th fl, No. 392, Sec 1, Nei-Hu Road, Taiwan

www.mds-intl.com

