Swimwear fabric and product manufacturers, designers and athletes agree there is nothing like a hot summer for promoting aquawear, along with success in swimming championships around the globe. The year 2000 saw the Olympics in Sydney, Australia, and 2001 the World Swimming Championships in Fukuoka, Japan. Both these events demonstrated the versatility of competition swimwear at the highest level, and something of what 2002 has in store on this theme has been on show at international fairs during the past few months: in Munich - at ispo summer 2001, in London - at Sun and Swimwear Show, and in Florida at its swimwear show.

In Munich, aquawear raised its profile in both competition and leisure swimwear and increased interest in this segment among the 30,000 trade visitors. In the 'beachwear ispo' hall scantily clad, beautifully sculptured bodies, both male and female, wearing the latest in colour and styling destined for pool areas and beaches next summer, were the hit of this, the world's largest international sports forum. The catwalk audiences were very enthusiastic.



Arena's Waternity

Sun, sand and sleek

For those of us who can remember the days of wet, saggy bathing costumes, modern swimwear fabrics are a revelation. Highly elastic, clingy and lightweight, pleasant to wear and form retaining, they incorporate much more: stretch to provide muscle control and support; surface textures and prints to enhance water slicking and drag reduction; UV and heat protection, mildew, chlorine and saltwater resistance; coatings to promote quick drying and to protect against suntan oils and lotions. There seems to be no end to the properties which are checked and tested in the laboratories of the top international fabric and swimwear manufacturers.

The fabrics on show not only fulfil all these criteria, but have a fashion life of their own too. Structures are created by weaving and knitting techniques, irregular stitches and granular textures, attractive yarn combinations together with handicraft techniques, including beaded embroidery, and fringes vie with technical finishes to catch the eye. And there were shiny fish-like scales, shimmery wet looks in gold, bronze and silver tones, filmy transparent fabrics which allow the right kind of rays from the sun to brown the body without burn, and a whole range of colours and images which speak of hot sunny shores, tropical forests and coral seas.

The increasingly expensive technical developments in fibres and fabrics for swimwear, created by the industry with championships in mind, spill over into training areas as well as into swimming for fun and beachwear styles.

Among the new fabrics taking the plunge for summer 2002 is Waternity, a 78% Nylstar polyamide/22% new generation DuPont Lycra material which guarantees chlorine resistance for 240 hours. Arena, branching out from lifestyle and fitness wear to become one of Europe's leading swimwear manufacturers, has developed this product specifically for competition swimsuits and states that the material retains its elasticity for a very long time, giving the swimmer a 'second skin' feeling. The greatly reduced water absorption, mould protection and its three times quicker drying time over other conventional materials make it a high-performance competition winner and targets a larger group of swimmers than its Powerskin collection. Powerskin reappears in Arena's top athletic competition swimwear collection as a woven rather than a knitted fabric which is extremely water repellent and can stretch up to 100%, enabling suits to fit snugly to the body.

New too is a knit fabric in 100 Viafil stretch for swimwear. By using the expertise of Italian knitters and finishers at Santoni, the Belgian yarn producer, Viafil is now able to produce not just a yarn but also the fabric and finished seamless garments. Its latest product is salt and chlorine resistant, a factor which helps to keep the 200 different colours fresh for the lifetime of the garment. Skin tests by the Institut Textile de France registered a 170% increase in comfort for the wearer compared with equivalent polyester fabric. Totally non allergenic, it can be worn comfortably by those with even the most sensitive skins. Viafil, best described as a very modified polypropylene, absorbs 9,000 times less water than polyamide and 17,000 times less than cotton. Drying time is much shorter due to the water being held in the structure of the material rather than in the yarn itself. This also helps keep body temperature even. Super strong - 50% stronger than polyester - and extremely lightweight, shrinkage occurs on first wash, from 0.5 and 1.5 per cent and remains stable after that. Stain removal, including sun oil, presents no problems, and the baked-in UV yarn protection still enables this environmentally friendly yarn to be recycled. If the medically proven anti-stress effects of between 20 and 30 per cent on a person wearing garments made from Viafil can also be translated into swimwear it could again improve results.

Debuting at ispo summer 2001 were fabrics from manufacturers Penn Nyla, using Cargill Dow's new NatureWorks pla fibre. A product combining a natural based material with the performance and advantages of both natural and synthetic materials, the finished products are expected to provide a bridge between natural fibres such as wool, cotton and silk and conventional synthetics. The multiple lines of fabrics are envisaged for a wide range of commercial, household and automobile products and, in particular, because of its moisture wicking, superior hand and drape and functional properties, for active sportswear, swimwear and lingerie.

Created entirely from sustainable, renewable resources such as maize, NatureWorks fibres are manufactured from simple plant sugars created through a process of photosynthesis and converted into a usable fibre through basic fermentation and distillation. This is an environment-friendly process using 20-50% less fossil resources than conventional polymers. Further developments from these two companies under the NatureWorks label will include spun, textured and flat yarn, including microdenier, based fabrics.

On the crest of a wave

Among those swimwear manufacturers also riding the crest of the waves in championship swim suits is adidas. The introduction of its Equipment full body suit was followed in 1999 by a FINA ruling that this styling is permitted, provided it is available to everyone to use or not as they think fit. This idea has been fully taken up and 'Thorpedo San', as Australian Ian Thorpe is affectionately known in Japan, wore three variations of this suit in DuPont's Lycra Power fabric, on the way to gold in the World Swimming Championships in Fukuoka recently. Adidas utilised the benefits of the material to design a silhouette that works with the athlete. The shape is tailored to the contours of the body which gives the suit the second-skin fit while providing various degrees of compression in different areas of the body, and freedom of movement. Stroke-specific suits for breaststroke and backstroke also use this technology as does its full body suit. This year the suits were tighter around the wrists and ankles, with halfbody suits tighter above elbows and knees.

Despite Thorpe's consistent success in Japan - three world records in four days, including the 200 metres freestyle in 44.06 seconds in the adidas Full Body Suit - the company is not resting on its laurels and the Innovation Team reports that further improvements for the 2004 Olympics are being looked at. Just exactly what is in store will become apparent but WSA is told that the graduated compression used in a one-arm tennis dress has enhanced Martina Hingis' game. This obviously has implications for swimmers, many of whom still prefer to feel the water on their calves and forearms and even though this somewhat reduces proprioception - the ability of the body to sense changes in position - it is unlikely we shall see a one-armed swimsuit.

Serious swimwear for serious athletes is produced by Speedo International. Its all-in-one Fastskin design was worn by 83% of all medal winners in the Sydney 2000 Olympics, and was just as often on the winning podium in Fukuoka. This range of swimsuits, in a high-tech imitation of real sharkskin scales, allows the water to slick past the body, creating 3% less surface resistance than previously achieved. Muscle and skin



Arena - Fancy Pool Lines

vibration are reduced through the use of elastane inserts, saving energy and raising muscle performance.

Endurance, a proven swimwear fabric in the training sector from Speedo has been brought up to date, and the range expanded. Being 20 times more chlorine and salt water resistant than normal nylon/elastane materials, Endurance has a softer snug-fitting elasticity which firms the body's shape.

The bioform development

Shape and control are all important in swimwear and the latest link up to give women the best shape possible is Bioform bra technology from Speedo. This technology was developed by UK bra and lingerie manufacturer Charnos after two years of research and working with designers Richard Seymour and Dick Powell. When it was finally developed, it became the subject of a TV programme which in turn attracted the interest of Speedo. The new 'biokini' is a two-piece swimsuit into which a Charnos bioform bra has been built. Revolutionary in its concept, Bioform incorporates a three-dimensional undercup support component that does not contort or distort the bust and is available in a range of sizes. A soft outer layer conceals the harder inner shield that provides the support. The inner core is a glass reinforced polypropylene shield covered in body-forming elastomer, moulded together to create a single component. Its inclusion in swimwear eliminates 'wobble' and provides shoulder strap support to help body posture and prevent back pain. The lack of wiring prevents pinching and other discomfort features of traditional bra support. Minimising bounce and movement, it helps to promote confidence in wearing swimwear both in the water and out. Incorporated in bikini styles, it enables tops to be fitted to size in a mix and match process where styling of the bra top is not affected by its use. These styles have been on sale in Speedo's own London store since mid-2001.

Shaping up for summer 2002 with over 500 different swimwear models - mainly in materials developed specifically for the company - is Solar Fashion GmbH. Its Tan Thru microfibre fabric - 68% polyamide/32% Dorlastan - is still a favourite with sunlovers, and here too the range has been extended. Despite Tan Thru's integrated UV protection factor 4-8, all uncovered skin areas should be creamed with the same protective factor, a higher factor being used on more sensitive skins even on the covered parts.

Young German swimmer Hannah Stockbauer surpassed all expectations In Fukuoka wearing Solar's Dry Weave fabric. This material is especially light in weight and more hydrophobic than normal Lycra, absorbing only 1-3% water with the rest pearling off. The hydro-dynamic line of the competition garments advances control of water turbulence, knocking fractions of seconds off race and training times. Dry Weave fabric is now more chlorine resistant which helps extend the life of the garment, and comes in more subdued colours which enjoy greater acceptance, particularly among up-and-coming talented swimmers.

Body Shape technology has been used by Solar for its leisure swimwear styles since it was first introduced in summer 2001. Keeping the ladies 'in form' for 2002, this sturdier fabric clings closely to the body and is extremely effective in holding in that unwanted 'spare tyre'. The fabric is a 200gsm microfibre which comes in a wide palette of colours and fashionable cuts, with or without soft cups.



Structured engineering and lingerie manufacture came together in the development of the Charnos Bioform bra material.

When it comes to colour this company has thought up something novel with its models "In & Out" which change colour on contact with water. This is made possible by the use of a special material with spot sections which are more hydrophobic than other sections. The original models were available in single colour only, but for summer 2002 there will be bi-coloured designs including lilac and green through to orange, and available in both one and two piece versions with exchangeable tops and bottoms.

Italian aquawear manufacturer Rue Royale Diana SpA, has this year signed agreements to sponsor swimming teams from Great Britain - until 2004, Ukraine and Lithuania - for an indefinite period - with swimwear for training , competition swimming, diving, synchro, and water polo disciplines. The latest addition to its swimwear fabric range is Eurojersey's Sensitive: a Meryl microfibre, light and compact which has the ability to influence the compression of muscle mass. It is available in two versions of which the 240gsm, the heavier fabric, guarantees a high level of muscle containment. The ultra fine weight is 50% thinner than non-run materials, and its slide treatment decreases water resistance, crucial in top competition swimming where hundredths of a second can make all the difference between first and second place. For training suits which need to maintain their form, elasticity and chlorine resistance over long periods in the water, and which also destroys bacteria in the water, while maintaining wearability and comfort, Diana is promoting its styles in its Defensive fabric.



Solar Fashion

The highlight of competition styles in Aritex Sport and Leisurewear's Olympia

collection is its latest development Biosonic. Using polypropylene fibres, it has produced a range of top athletic styles for both men and women which guarantees an extremely low water absorption rate for a much longer period than other comparable products. Developed together with swimmers from the many associations and international swimming teams it sponsors, Biosonic is more chlorine resistant than previous materials used for these suits, essential for both training and competition swimwear, and the lighter weight and high elasticity of the garment guarantees shape and form. The women's style has a high neckline and all shapes are styled for maximum speed through the water after tests in a water-current channel. Speed is further enhanced by surface interest of material mix, with and without printed water droplets which are arranged in a pattern consistent with hydrodynamic forces. Other competition models Atlanta, Sydney and Tokio include a Meryl-Award model.

At home in Bondi

A name that conjures up surfers and beach belles is the Australian swimwear manufacturer Seafolly. A new fabric in its collection for summer 2002 is Paper Lycra, a high quality, matt surfaced and an extremely lightweight material of 30% Lycra, and the new chlorine resistant polyester/ Lycra, Waterwear. Coming from a country which is well aware of the dangers of UV radiation, it is not surprising that the latest fabric in its collection has UV protection properties, and is also used for an accompanying sunvest. This company sets its style lines in a retro-look, particularly for bikini models where the bra top comes in all the current triangles, bandeau, push-ups and aqua-bras as well as the tankini and all in cup sizes from B/C to E.

With a 'Welcome to the Beach' slogan, Ariella introduced its summer 2002 collection of swim models. Taking into consideration that larger busts need more support and properly shaped and moulded cups, its one piece garments are available in A-C cup sizing - two piece suits in A-D - have enclosed wiring and push-ups and are available in longer body lengths than in previous seasons.

Hot summery pinks, orange and yellow to green shades are used for exotic prints of palms, flower and bird designs, and fresh aqua and turquoise tones conjure up the colours of coral lagoons. Light and shade are contrasted by the use of lurex woven through the fabrics, some of which have a fish scale-like finish. Ariella's beach programme is rounded out with a matching collection of pareos, shorts and over-skirts, T-shirts and blouses to take one elegantly from pool or beach to lunch or to shop while the imitation jewellery strass applique styles would look good at any pool bar.

Although new fabric developments are concentrated generally in the competition and training swimwear, all major companies showing at recent swimwear shows also produced elegant, fashionable and colourful swim and beachwear for the coming summer 2002.



Ariella Swimsuit

It's kikoy time

In swimwear it is difficult to avoid a cross-over between fashion and function, performance and peripheral accessories, yet mention must be made of a company which has no high-tech fabrics, no factories and no great promotional budget. What it does is have loads of passion, and its owners have shown its products successfully in the competitive international market. The Kikoy Company in Nairobi, Kenya, is a self-help enterprise which employs the patience and skills of East African women in the making of their kikoys - a 100 per cent cotton sarong-like garment. The cotton is grown in neighbouring Tanzania, then spun and woven locally. Originally a traditional garment for men in rural Kenya, and comparable to any of the high-tech pareos which major manufacturers produce, the woven kikoy has been well received by international buyers as a cover-up for men, women and children in a variety of colours and unusual sizes and is also available in 100 per cent cotton towelling.

Kim McKenzie, managing director of the company, states: "Producing kikoys offered a great opportunity to form a working group for poverty-stricken women in Nairobi, who had little means by which to support themselves and their families." In this community, women are expected to contribute 90% of their income to the family while their men contribute only 40% of theirs. The company is structured to ensure that each woman is able to work and at the same time look after both home and family. They take the kikoys home with them to finish the garments - each garment is hand-finished with every thread which forms the fringe, hand-tied and knotted. The yarn is dyed with colourfast dyes manufactured in Germany to the highest environmental standards, each carrying an 'eco-certificate'. The company commissions exclusive designs from a local mill and can meet individual specifications which can then be trade marked.

Kay Turtle



kikoys on the beach