

Rubber for River Rafting



Teva Ladies Rodium

The "R" word that comes to mind when exposing the feet to cold water for long periods of time, as in rafting and rocks, is "Raw". The man-made solution is appropriately also an "R" word - Rubber. As distinct from insulation and waterproofing that is necessary for total submersion, footwear for kayaking and white water rafting has developed along different lines. Participants in these sports, which are both competitive and recreational, expect to get wet and dry again.

The earliest form of foot covering preferred by the white water boating crew were called "waterdogs", and they are still around today. One can think of these as foot gloves or undies for the feet. Made of neoprene rubber, waterdogs are 2-5mm neoprene booties with a thin sheet rubber wrap-around outsole. Teva's version called "Chameleon" has what is called a Spider Rubber outsole that is a super sticky, non-slip SBR rubber material for use across wet and dry terrain. The Chameleon bootie can be worn alone or inside a sandal. Palm Profile produces its kayak versions in both shoe and bootie profiles with adjustable hook and loop straps and drawstring pulls. Neoprene is the most popular garment material used in the dive industry, mainly for wetsuits of course. Like the wetsuit, neoprene shoes and booties are made from gas blown, closed-cell neoprene filled with millions of tiny bubbles that act as both an insulator and water barrier.

Neoprene comes in different forms - unlined, lined on one side or lined on both sides. In addition to added strength, the lining, which can be nylon, brushed raschel or lightweight fleece, aids in slipping the boots on and off. Another popular upper material used in this category of aqua sock is Power Mesh or

Ventilator Screen Mesh. This elasticated porous upper material is both durable and flexible allowing water to pass through without collecting. It improves drying time and prevents damage and weight gain from water-logging.

The next form of popular kayak footwear was the water or sport sandal. Originally developed by Mark Thatcher in 1982, his company Teva (from the Hebrew word for Nature) has continued to refine and define sandals used specifically for water sports. The original Teva sandal featured a neoprene midsole, a specially compounded 'River Rubber' outsole that was designed for use in and around water and adjustable nylon webbing straps. Many innovative improvements have been added over the years. Today's latest Ultimate Thong, for example, features non-marking, ultra-sticky Spider rubber, an innovative instep strap to eliminate flip-flop and an encapsulated midsole with heel shock pad. Other sandal models from Teva feature a patent-pending 360 degree continuous strapping system it calls Wraaptor Technology that simultaneously secures the instep and arch shank to the foot. This creates a noticeable 'at-oneness' between shoe and foot that provides heel-to-forefoot stability and motion support. Since the introduction of the sandal in the 1980s many niche companies such as Chaco, FiveTen, Harmony, Reef Brazil and Palm Profile have concentrated their shoe design in the water sports market. Larger brands, too, such as Nike and Rockport have helped to popularise the sport sandal in the past 20 years.

The latest development in footwear specifically for kayaking and sea or white water rafting is the water shoe. There are different classes and degrees of difficulty in this category

of watersport from Class IV rapids to mile-long portages. Amongst the numerous shoe requirements for safe, successful seafaring are padding under the foot, a low outsole profile, drainage, easy closure (and more importantly wet-exit) systems, wet traction, good heel support and anti-microbial and mildew materials. From this set of criteria several companies have developed the watershoe. Rockport has the DMX Crustacean incorporating parent company Reebok's underfoot cushioning system, a neoprene and silicone treated leather upper with adjustable back strap and minimal slip outsole. FiveTen offers its Nemo shoe with lightweight flexible waterproof materials and a secure fit buckle closure system. The shoe has an AquaStealth non-marking outsole for stability.

Teva offers several models of advanced watershoe including its Rodium, Rodium S.O. and Ricochet N.V. The Rodium S.O. has a Spider rubber DSR outsole which is a dual-density rubber outsole with a strategically-placed pod of S2 rubber in the arch for improved traction on wet, slippery surfaces such as those found on rubber rafts and rocks. This model also features a Shoc Pad, a blended polyurethane/EVA unit in the heel cup that evenly transfers the energy of impact throughout the footbed and away from the heel. This energy return actually provides greater spring with each forefoot push-off. Rodium S.O. has a slip-on-and-off Ventilator Screen Mesh upper with all-weather leather cradle.

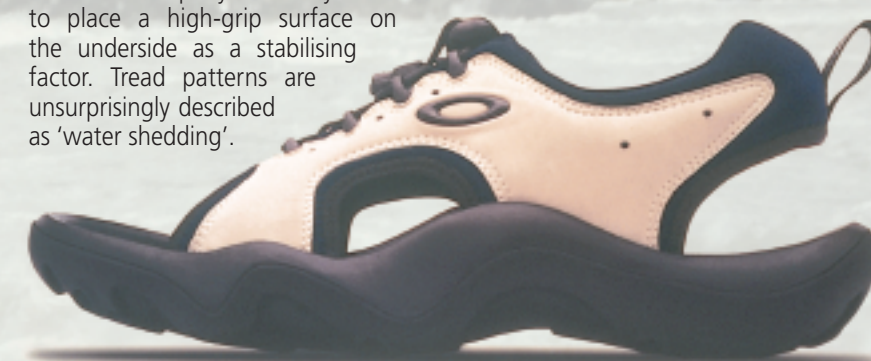
This specially tanned and treated leather requires an extra step during the tanning process to make the leather stain resistant and easy to care for while protecting its look and feel. The waterproofing is accomplished by closing the areas between the grain in the leather, yet maintaining breathability, much like waterproof breathable fabrics.

On the Ricochet N.V. shoe, Teva incorporates AgION anti-microbial treatment, a process that uses ionized silver, a naturally occurring microbe inhibitor, in the topsole (footliner) to help reduce odour-causing bacteria. Another innovative technology from Teva comes in the form of an

upper treatment called Liquid Frame Technology, a patented 360 degree closure system that secures the entire shoe around the foot. A single, continuous strap envelopes the forefoot to form a supportive, lightweight and quick drying cradle.

Oakley, that is the same Oakley as the sun glasses, has developed a range of visually startling sports footwear that includes three 'wet' sandals based on its Net Shape CAD/CAM technology. The Smoke series, as it's known, is crafted around some very specialised lasting that includes a markedly obvious metatarsal rise matched to a wide forefoot. This is said to allow the correct positioning of the toes during the walking action.

The Smoke outsole assemblies fully encapsulate the midsoles as an aid to durability, and the company uses layered vulcanisation to place a high-grip surface on the underside as a stabilising factor. Tread patterns are unsurprisingly described as 'water shedding'.



Oakley Big Smoke sandal

Of the three models available, Smoke Ring and Big Smoke offer full sandal uppers, reinforced in the heel area for additional comfort - while the basic Smoke has a clog-style rear entry that uses a low-hysteresis top surface to minimise slippage during wear. External materials are urethane-coated synthetic nubuc for Smoke and Big Smoke; Smoke Ring uses an abrasion-resistant microfibre version of the same material.

So what next? Inflatable canoe-sized overshoes for walking on water? Prototypes have already been made for the movie industry - I suppose anything is possible.

Mel Cheskin



Oakley Smoke slip-on



Teva Rodium slip-on