

DMF-Free Waterborne PU Hyperfoams by Ocean Plastics Co., Ltd., Taiwan (OPC)

--Breathable and hydrophilic, providing you with the comfort you need all day!



Material Introduction

OPC's waterborne PU hyperfoams are made of waterborne polyurethane dispersion resins mechanically foamed to an open microcellular, sponge-like structure. Air and vapor can channel through it, making our hyperfoam lightweight, breathable, air permeable, vapor permeable, and hydrophilic. As hyperfoam thickness increases, its structure provides increasing shock absorption and shape support. Since it's made of DMF-free waterborne PU, it's friendly to the skin and hypoallergenic. Also, OPC can provide hyperfoams with more elasticity, which can stretch alongside stretchy fabric for end-user application. Finally, OPC offers varying hyperfoam thicknesses of 0.2, 0.5, 1.0, 1.5, and 2.0 mm, and starting from 0.5 mm, our regular lineup currently offers 2 softness versions. Other customizations are possible with development discussions from our end customers.

When combined with different functional textiles or leather, OPC's waterborne PU hyperfoams can be used in a variety of applications, such as applications that require skin contact, shock absorption, cushioning, breathability, elasticity and support, shape retention, and/or sweat vapor absorption. For example, they can be used as an inlayer laminated between 2 stretch fabrics for sports and sports medicine braces and



supports, as an inlayer between 2 fabrics for yoga pants adding more shape support and wicking properties, as cushioning material for consumer electronics protector sleeves, as an inlayer lining material for garment (which may add possible functions like windproofing and / or downproofing), as an inlayer between 2 fabrics or leather for shape retention support, or as an insert in shoe tongues, etc. Other creative applications are often proposed by our customers as our material offers a versatile range of functionalities.

OPC's waterborne hyperfoam consists of a purely sponge-like structure, so it should be laminated with fabrics, leather, or other substrates on the outside to ensure strength, abrasion resistance, and tear resistance for real-world applications. The below photo is an illustration of our 2.0 mm hyperfoam's profile under magnification.

