



EnerGel

Hand Conditioning
Technology

SWsafety.com

Skin Hydration

The skin is the largest organ of the human body; its vital role is to prevent loss of water and other components of the body to the environment. The Stratum Corneum, outer layer of the skin, holds water by acting as a barrier to water loss and by attracting water molecules from the surrounding environment that provide skin moisture. Topical moisturizers consisting of emollients and humectants can also help the skin to reduce water loss.

Emollients are used to soften and smoothen the scales of the skin, which help reduce rough, flaky skin texture. They are occlusive substances that provide a layer of protection that helps prevent moisture (water) loss from the skin.

A **humectant** is a substance that bonds with water molecules to increase the water content in the skin itself. It draws water to the skin from a humid environment, and they enhance water absorption from the outer layer of skin.

Polysaccharides is the main active component of Aloe Vera gel for skin hydration, it is a larger molecule (with high-molecular weight of >1000kDa). It acts as a humectant and provide short-term moisturizing effect but does not penetrate the skin.

Importance of Molecular Weight

Human skin, as a barrier, can resist the penetration of many molecules. However, smaller molecules (under 500 Dalton) can penetrate the skin and be absorbed.

EnerGel technology converts the high molecular-weight of Aloe Vera polysaccharides (>1000kDa) in to specific lower weights aimed for skin penetration and hydration. Additionally, this technology boosts the Natural Moisturizing Factors that are inherently present in Aloe Vera.

California Proposition 65 and EnerGel

SW uses a decolorized Aloe Vera, exclusively available as EnerGel. We do not use any carcinogenic material in our products. Visit SWsafety.com for more information.

Tested and Certified

Confirmed by third-party test Institutes
Certified by independent laboratories and institutes to meet safety, quality and performance standards.

ISO 10993-10 Biocompatibility

Non-irritant and non-sensitizer as tested per the ISO Standard.

Suitable for direct contact with food

EnerGel gloves comply with the requirements of U.S. FDA 21 CFR 177.2600-Rubber articles intended for repeated use.

UL NFPA 1999-2018

Meet stringent requirements of UL National Fire Protection Agency 1999 standard on PPE for Emergency Medical Operations.

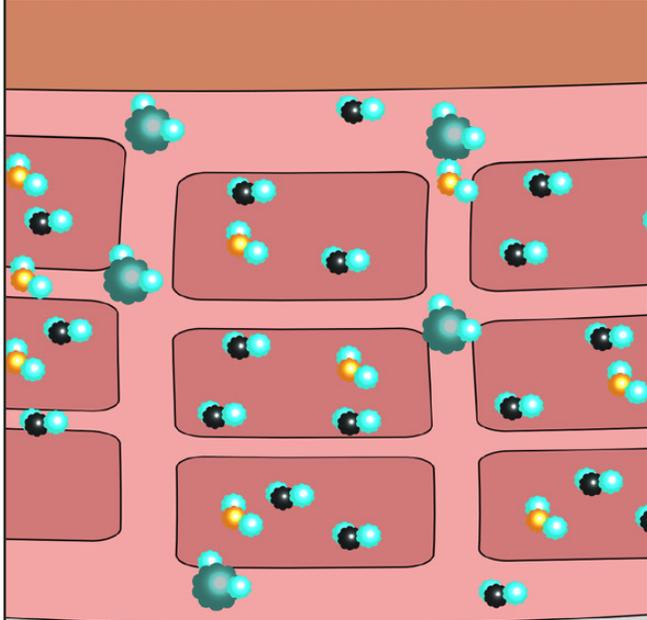
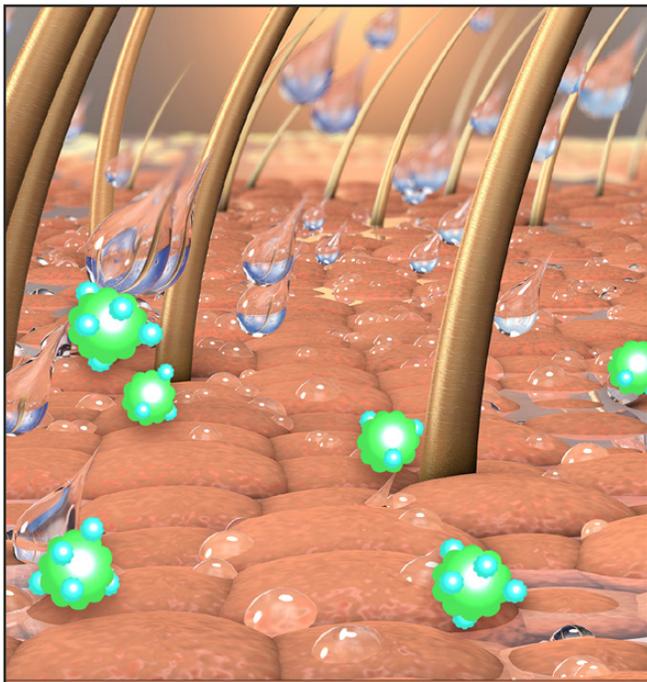
Skin Health Alliance (SHA)

Accredited by SHA, an independent, not-for-profit organization working with international dermatologists, researchers and skin scientists.

The New EnerGel Technology

SW offers the new, optimized Aloe patent – EnerGel. A glove coating that delivers 2-times more skin moisturizing benefits than standard Aloe technology.

- Advanced Aloe Vera concentration
- Increased Natural Moisturizing Factors (NMF)
- Skin-Penetrating Polysaccharides Enhanced Skin Absorption



Aloe Vera polysaccharides 1000 Da hydrate on the skin surface, but do not penetrate the outer skin and can be washed away.



New EnerGel has reduced Aloe molecular weight to below 500 Da. This allows for thorough penetration of the outer skin and reduce transepidermal water loss to retain moisture in the skin.



Natural Moisturizing Factors (NMF) attract water molecules from the surrounding environment and provide moisture to the skin cells.



Water molecules that are naturally on and within the skin that provide moisture, bonding to EnerGel Polysaccharides and NMF.

Universal Precaution

Hand washing is the most important infection control measure to prevent illness. It is common for healthcare, food handling and packaging, and laboratory settings to have hand washing built into their procedures. Similarly, industrial workers are exposed to harsh soaps and cleansers to keep their hands clean.

Aloe Vera and other emollients and creams are widely used as moisturizers, however due to their high molecular weight they cannot penetrate the skin surface and are easily washed away, leaving your skin hydrated only for a short time.

Universal Problem

Frequent hand washes, soaps and cleansers remove the natural elements in skin that help promote hydration. Moisturizers can instigate a chemical reaction inside your glove causing more harm to your skin. Familiar symptoms with damaged skin include additional sweating, redness, dry itchiness, and scaling.

EnerGel Delivers 2-Times the Benefit than Standard Aloe Technology

Enhanced Hydration Retention

EnerGel penetrates deep into the skin layer, deploying key Aloe polysaccharides, helping to retain moisture.

Longer Lasting Hydration

The patented EnerGel process allows polysaccharides to be absorbed, instead of settling on the skin surface. This prevents moisturizing elements from being washed away.

Increased Moisturizing Elements

EnerGel is a concentrated formula that increases Natural Moisturizing Factors (NMF) providing enhanced moisture binding ability to skin cells.

Reduced Contact Dermatitis

Delivered deep into the skin, EnerGel assists the bodies healing process, soothing skin and reducing inflammation and irritation.

“SW Safety® specializes in manufacturing, R&D and hand health technologies to provide premium hand protection products that enhance worker performance. SW applies its category experience and investments in new technologies to make workers more successful by improving their safety, hand health, and job performance.”



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