



QUENCH™

QUENCH vs. SYNTHETIC POLYMERS

THE DIFFERENCE BETWEEN QUENCH™ AND SYNTHETIC POLYMERS

Quench is totally different from other water-preservation products, including any of the synthetic polyacrylate and polyacrylamide formulations (e.g., PAMs) currently available. These synthetic polymers are superabsorbents made with petroleum-based formulations and often use the active material found in disposable diapers. These synthetic polymers hold water tightly—a good thing for diapers, but not for plants that compete with the polymers for moisture, which explains why these formulations are less effective in growing plants.

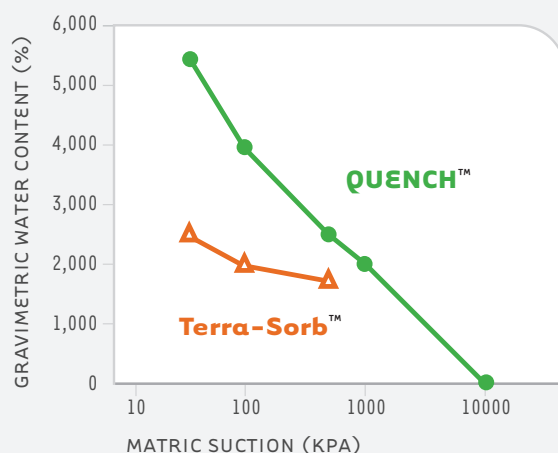
Quench is formulated from natural cornstarch. It is nontoxic, biodegradable, pH-neutral and safe for all plants. Many synthetic polymers typically contain significant amounts of sodium, petroleum derivatives and other fillers, which can be detrimental to food crops.

Quench was developed to hold 400 times its weight in water, although a Quench granule could be produced to hold as much as 5,000 times its weight. The Quench particle has been developed to deliver the optimal balance of water and nutrients to benefit plants in agriculture. The most important factor is not total absorbency, but the ability of any superabsorbent to release the greatest amount of water as the plant needs it. In this vital area, Quench is unmatched.

Virtually all synthetic polyacrylates and polyacrylamides are formulated by large chemical manufacturers and are

repackaged by distributors under such trade names as Terra-Sorb®, Soil Moist®, HydroSource®, Solid H2O, STOCKOSORB®, Tramsorb, Watersorb®, WaterSmart Crystals and WaterGel Spikes.

QUENCH COMPARED SYNTHETIC POLYMERS



After 21 days, Quench has much higher absorption than a leading synthetic polymer. The downward slope plotting Quench performance demonstrates its superior ability to release water under the suction pressure of plant root systems and deliver water within the time period it is most needed by plants. The relatively flat line shown by the PAM demonstrates that synthetic polymers cannot absorb enough water during this period and also have less capability to release water.

Source: Geotechnical Consulting and Testing Systems, Tempe, AZ.



Water is held by Quench™ granules in a “loose” hydrogen bond providing superior “water release” capability.