



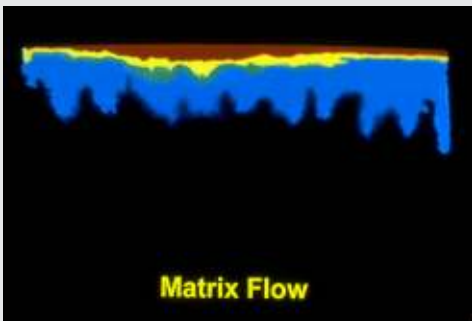
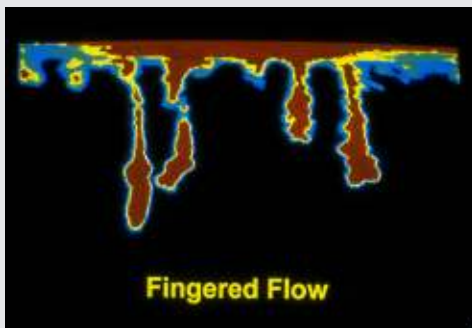
Prevent Water Repellency & Promote Turf Uniformity

What is Primer® 604?



Primer 604 is a high-performance soil surfactant designed to be used monthly as the foundation for an effective rootzone management program. This matrix flow soil surfactant is specifically formulated to establish uniform downward and lateral flow of water and/or solutes in the soil profile. This ensures that water moves evenly and consistently into and through soils, providing the optimum environment for your turf. Primer 604 can be safely applied to all turf species and will perform in all soil types and in all climates throughout the entire growing season.

Studies show that using the Primer 604 program approach provides the most consistent control of water repellency. When used on a monthly basis, Primer 604 treats water repellent areas before they develop. Because it builds up in the soil profile throughout the season, it provides the most comprehensive control at the height of the season when the weather is especially hot and dry. Primer 604 puts you in control, giving you greater consistency and overall performance throughout the season from start to finish.



The Benefits of Matrix Flow

Untreated soils do not wet uniformly, but rather follow a path of least resistance (top). Fingered flow occurs when the wetting front becomes unstable as water infiltrates. The front breaks into "fingers" causing only a small portion of the soil mass to become wet, while the majority of the rootzone remains dry. These "fingers" act like funnels directing and accelerating the flow of water.

Under both laboratory (bottom) and field conditions, Primer 604 was found to establish and maintain matrix flow, a uniform downward and lateral flow of water into the rootzone. Primer 604 increases receptivity to applied water, produces uniform moisture, and dramatically reduces fingered flow and its associated problems of dry spots, wet spots and uneven wetting.

Why Season-Long Surfactants Fail

A number of surfactants claim season-long staying power, but exactly how long is “season long?” Surfactants by nature break down in soils over time, and drought and summer stress conditions can cause them to “break” even faster. This leaves your turf high and dry at the most grueling part of the season, when “long-term” chemistries are at their weakest.

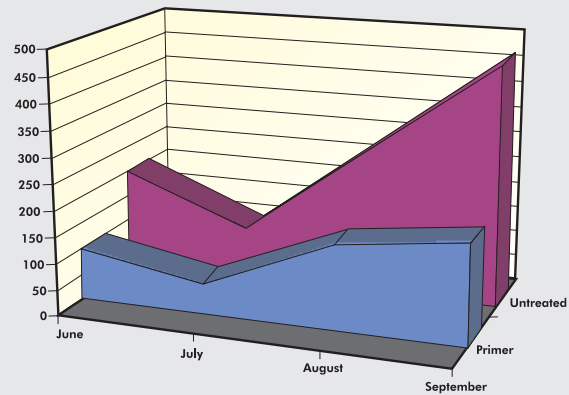
New water repellent materials such as sand topdressing and accumulated thatch, are continuously being added

to the soil profile. Since no additional surfactant is added in a season-long strategy, water repellency will develop in these areas. This means additional applications must be made or risk losing your turf.

When used on a monthly basis, Primer 604 treats water repellent areas before they develop. Primer 604 builds up in the soil profile throughout the season, providing the most comprehensive control and consistent turf quality.

Infiltration into Water Repellent Soil (Guelph Turfgrass Institute)

Primer 604 maximizes infiltration and promotes more consistent movement of water throughout the season. In trials conducted at the University of Guelph, researchers found that using Primer 604 on a monthly basis improved the infiltration of water into treated soils. Primer 604 shows consistently lower infiltration times compared to the untreated. When infiltration became really difficult in September, the Primer treated soils still accepted water readily.



Comparison of Depth Performance (Georgia 2001)

When soil water repellency is reduced deeper in the soil profile, water is able to move more deeply into the rootzone. Compared to an untreated control, Primer 604 significantly reduced water repellency deeper in the rootzone. Competitor “C” was effective early, but diminished throughout the study. Primer 604 continued to perform deeper later in the season, enabling soils to move water deeper.

