



HydroForce
Evolve
Soil Penetrant Surfactant

Formulated in Australia



Product Overview

HydroForce Evolve is a liquid anionic soil-amending additive, which modifies surface tension of the hygroscopic (bound) water in the soil profile, similar to the way a Soil surfactant acts upon surface water, but with very different result. The ionic nature of soils, particularly clays, and the polarized molecular structure of water results in very strongly bonded (hygroscopic) water in the soil matrix. It is the strength of this soil water adhesion which leads to soil compaction, resulting in poor water infiltration, low overall water-holding capacity, reduced soil aeration, and high soil shear strength. By penetrating to vertical depths of over 1m, and by acting upon the bound water (unlike soil surfactants which act on surface water), HydroForce Evolve provides long lasting improvement to soil conditions.

One of the most readily observed results of application of HydroForce Evolve is an improved water infiltration rate. By breaking down the adhesion that creates compaction of soil into rigid structures, particularly into a hardpan layer, HydroForce Evolve readies the soil for much deeper and faster influx of water. The increased penetration of water results in reduced run-off, evaporation, and standing water in previously wet areas.

A related benefit of HydroForce Evolve application is an increase in water holding capacity. By releasing a portion of the bound water to move as free water in the soil, the total water available for turf use is increased. As a result, water efficiency is increased and the requirements for irrigation, both in amount and frequency, are reduced. The breakdown of adhesion in soil structures produces a more open, better-aerated soil profile. As a consequence, the treated soil is more oxygenated and sustains an increased biological community. Lastly, the breakup of compaction in soils results in a reduction in soil shear strength. The forces required for turf roots to penetrate the soil are thereby decreased, resulting in deeper and more uniform growth. Resistance to heat and foot traffic stress is also enhanced.

In summary, HydroForce Evolve addresses a range of problems resulting from soil compaction. This is because the soil itself is altered, and results are generally much longer lasting than those obtained via traditional soil surfactants.



Key Features

- > Improves water infiltration and penetration in all soil types, but particularly effective on loams and clays.
- > Enhances soil aeration.
- > Ideal for use in the winter months to keep the rootzone from becoming over saturated.
- > Eliminates wet/dry spots.
- > Highly tank mix flexible.
- > Low use rates, allowing for economical treatment over larger areas.
- > Formulated specifically for turf management situations. Manufactured and developed in Australia.



HydroForce Evolve – Application Details

Situation	Rate	Comments
SOIL TREATMENT – TURF IMPROVED INFILTRATION Apply to growing mediums in Golf Greens, Tees & Surrounds, Bowling greens, Tennis Courts, finely cut fairways and sportsfields and other turf surfaces.	750-1L/ha (7.5-10mL per 100m ²)	The active ingredient in HydroForce Evolve is Alkyl Sulphate (ALS). Apply HydroForce Evolve soil treatment to the entire turf surface, both high and low spots. HydroForce Evolve can be applied at any time, however, for best results HydroForce Evolve should be applied 2-3 times per growing season. It may be applied by any conventional turf spraying method. HydroForce Evolve is compatible with most liquid fertilisers, insecticide and fungicides which are needed to be placed into the soil environment. Light rain or irrigation applied the same day of application will accelerate the product's soil activity.
GOLF COURSE BUNKERS – IMPROVED DRAINAGE RATE Apply to sand in bunkers in golf courses for improved drainage.		
SOIL TREATMENT – ORNAMENTALS IMPROVED INFILTRATION Apply to ornamental plants growing in poorly drained or compacted soils.	150-200mL per 100L of water	HydroForce Evolve can be applied at any time, however, for best results HydroForce Evolve should be applied 2-3 times per growing season. Apply via handgun or knapsack application method. HydroForce Evolve is compatible with most liquid fertilisers, insecticide and fungicides which are needed to be placed into the soil environment. Light rain or irrigation applied the same day of application will accelerate the product's soil activity.

Chemical Profile

Active Ingredient:

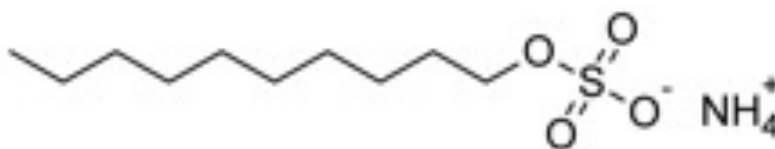
48% Alkyl Sulphate (ALS), 52% Inert Ingredients

Product pH: 8.5

Appearance and Odour:

Dark Brown with alcohol like odour

Specific Gravity: 1.0



Molecular Structure