



# Manila™ Polypropylene

**Manila™ is a highly refined polypropylene fiber that has been specially developed to stabilize soil with or without turf.**

**When Manila™ is mixed with the soil or the lawn, it will increase pore space and air filled porosity of the soil considerably, which gives the following characteristics:**

- **High flexibility and an increase of the turf's load bearing capacity**
- **Rapid draining of water**

Adding Manila™ to the soil will stabilize the turf, and the fibers will act like natural grass roots. The fibers will help the grass roots grow better, and thus the fibers will increase the natural growth of the grass roots.

Manila™ is mixed into the soil before the grass is sown or planted. The fiber creates its own pore spaces that give an air-filled porosity.

This means that the grass can drain water and breathe better than without any fibers. This gives happier grass and an increased growth rate.

The grass roots intertwine with the fibers and create a wide network. Consequently impacts can be dispersed among the entire network, spreading and increasing the bearing capacity.

This form of stabilization of the soil gives the best results where there is a lot of traffic as with football, horse riding or any other form of sport and provides resistance to the surface where impacts occur.

Manila™ is greatly advantageous on parking spaces and fire lanes where a lot of heavy traffic occurs, and offers maximum protection against changing weather as well.

As an example, riding arenas are exposed to heavy impacts whether the area is with or without grass.

Water can further more be a crucial problem for arenas. Too little water, and it will turn into a dusty brick, and too much will make it muddy.

Manila™ will stabilize the arena and will at all times contain the adequate amount of water that will make the arena extremely well suited in all weather.

Manila™ will not cause downward percolation to the groundwater and it can be purified by normal, well-known screening methods.

## Application:

- All forms of sports venues where heavy impacts and wear and tear occur
- Riding arenas
- Natural grass access roads
- Natural grass car parks

## Properties:

- Provides the perfect surface for all forms of sport
- Bearing capacity is increased
- Offers increased shear strength
- Reduces mud, dust and frost-bound surfaces

## Advantages:

- Offers greater resistance to wear and tear
- Produces a surface which stays flexible, porous and level for longer
- Aids rapid draining
- Provides a durable turfed load bearing surface
- Bouncy absorption
- Savings as far as maintenance is concerned

## Product program:

Manila™ fibers are available in lengths of 12, 18 and 24 mm.

## References

Stald Nørregård, Vittarp DK

### Specifications - Manila™

There are a number of scientific tests and practical applications that document the unique advantages of Manila™ fibers.

Raw material:	Polypropylene C <sub>3</sub> H <sub>6</sub>
Fiber length:	18 and 48 mm
Fiber diameter:	35 x 250-600 μ
Density:	
- Manila™ standard	0.91g/cm <sup>3</sup>
- Manila™ special	1.01g/cm <sup>3</sup>
Maximum load*:	340 - 500MPa
Elasticity conversion*:	8.5 - 12.5GPa
Maximum tension*:	Max. 8 - 10%
Softening temp.*:	Approx. 145°C

\* Measured in accordance with manufacturer's test procedures.