

HYDR TURF

One Stop Centre For All Your Hydroseeding Needs

www.hydroseeding.my

ABOUT US

GREEN TOUCH ASIA SDN. BHD. is a well-established company with a strong foundation in the hydroseeding industry that has led us to be a key player in the industry for over a decade. We are proud to say that we have been supplying the highest quality of hydroseeding products and equipment throughout Malaysia under the brand of HYDROTURF with absolute satisfaction from our customers.

HYDROTURF is in direct partnership with top hydroseeding industry innovators worldwide and is invested in designing every product to be of utmost facilitation for your personal hydroseeding needs.

And because we are closely linked with industry experts, and with fewer parties in between, there are fewer costs associated with bringing these high-quality products to market. Fewer costs on high-quality hydroseeding equipment mean lower pricing. That is how we are able to deliver exemplary value to you, without sacrificing the quality you expect.

Our mission at HYDROTURF is simple; to provide high-quality services for our valued clients. Our team goes above & beyond to cater to each project's specific needs. Through open communication and exceptional service, we hope you will find what you are looking for with our services. For more information or general inquiries, get in touch today!

At HYDROTURF, we pride ourselves on the high-quality hydroseeding services we provide. Our customers know they can trust us for our high quality and affordable hydroseeding services.



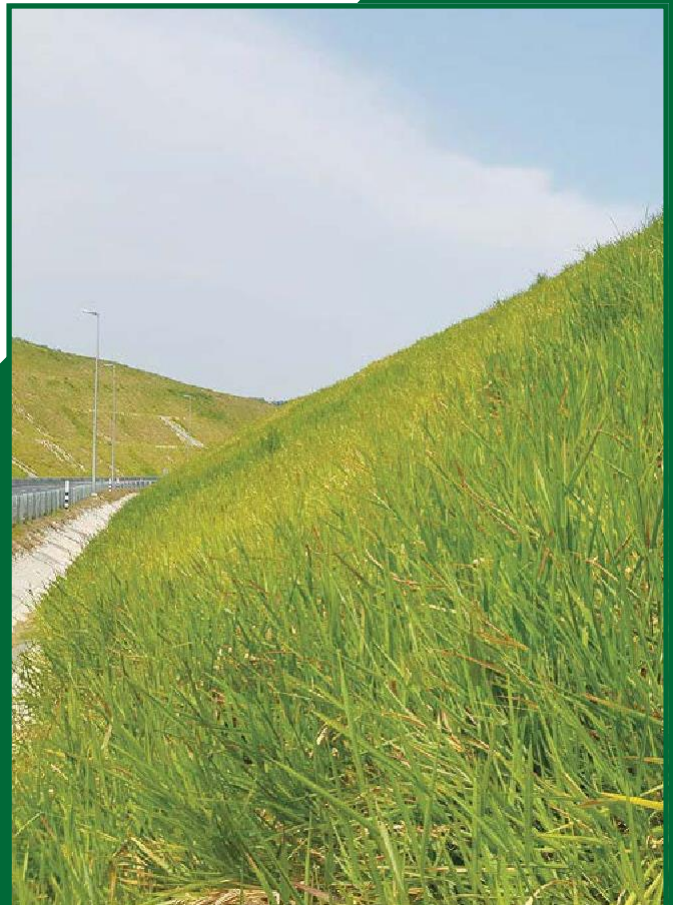
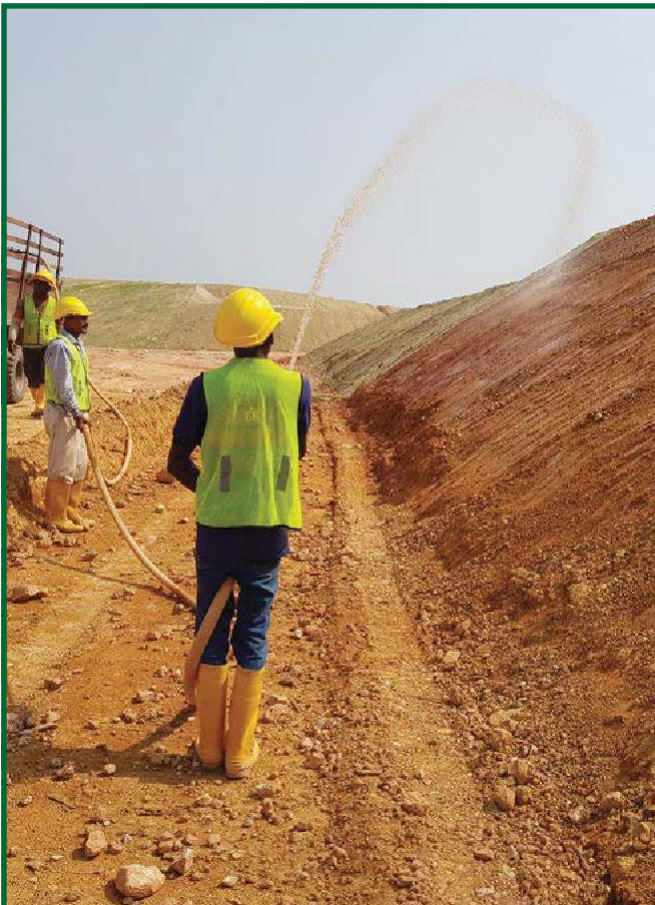
WHAT IS HYDROSEEDING?

Hydroseeding is the method of embedding seeds onto raw slope face through slurry which is sprayed over the ground surface in a uniform layer to establish vegetation for erosion control. This process is typically done via a hydroseeding tank (mobile slurry mixing tank with pump) which is usually truck mounted. The slurry usually comprises of water, grass seeds, fertilizer and paper mulch.

Hydroseeding method is ideal for slopes with little or no access, steep slopes (usually cut slopes over an angle of 35 degrees) where normal turfing would prove to be either very difficult or impossible, rocky or gravelly slopes with cracks, crevices and totally devoid of topsoil. In addition, hydroseeding is a very fast and efficient method with 0.5-hectare coverage in an hour of spray.

It is highly recommended for the slope to be protected with biodegradable erosion control blanket after hydroseeding to promote the highest possibility of seed germination. Biodegradable erosion control blanket bonds directly to the soil surface thus providing excellent prevention of grass seeds being washed away by rainfall, eaten by birds or run off velocity. Furthermore, biodegradable erosion control blanket also improves soil fertility and moisture retention besides providing protection for young grown grass.

We offer a broad range of hydroseeding solutions and will customize to each sites unique requirements and characteristics.



WHERE HYDROSEEDING CAN BE APPLIED?



Horizontal Soil and
slopes at an angle of
70 degrees



Reinstatement of
logging areas



Vegetation of cut
and fill slopes



Bridges
abutments



Temporary erosion
protection during
construction



Earth dam
vegetation



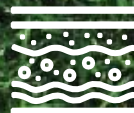
Building and
residential projects



Grassed waterways



Reclamation of
mined lands



Reinforced soil
structure



Landscaping



Slope to
culvert outlets

5 STAGE OF HYDROSEEDING



STAGE 1

Raw slope after excavation ready for hydroseeding.

STAGE 2

Hydroseeding is carried out on the raw slope.



STAGE 3

Slope is protected with biodegradable erosion control blanket after Hydroseeding.

STAGE 4

Initial growth stage of Signal Grass after 2-4 weeks of Hydroseeding.



STAGE 5

Slope with fully grown Signal Grass after 6-8 weeks of Hydroseeding.

WHY CHOOSE HYDROSEEDING?



Cost Effective

The most economical choice for establishing the growing result desired without the expense, time consumption, material costs or installation demands of sodding or traditional hand seeding methods.



Quality

Promotes a much healthier, greener and longer lasting lawn than sodding or hand seeding applications as the root establishments is deeper into the soil and avoids the shock of being transplanted into foreign soils.



Coverage

Provides a thicker, more uniform lawn that consists of a mat of interlocking fibres creating the ideal growing micro-environment for germinating seeds. No gaps, shrinkage, clumping nor additional plantings required.



Erosion Control

Holds moisture and protects against erosion from wind, rain, sun and pests through the binding of hydroseeding slurry with the ground surface soil.



Healthier Grass

Creates an evenly covered area that forms a barrier to keep seeds stabilized and retain moisture, fertilizer and other growth enhancing nutrients. Stimulates the seeds to grow a healthy, deep-rooted system in the ground where moisture is at its greatest.



Speed

Faster and easier to install compared to sod or hand seeding.



Safety

Completely safe and non-toxic method of growing grass that is harmless to kids, pets and the environment.



Versatility and Use

Hydroseeding has become increasingly popular, overshadowing both hand seeding and sod, for a wide array of job and applications.

RECOMMENDATION FOR 1 TANK OF HYDROSEEDING TANK






(approx. 1500 litres)

Covers area of approx. 800m²

Item	Product	Recommend unit for 1 tank of Hydroseeding Tank
1	Signal Grass (25kg / bag)	1/2 Bag = 12.5kg
2	Bermuda / Carpet Grass (25kg / bag)	2kg
3	White Millet (20kg / bag)	1/2 Bag = 10kg
4	Paper Mulch	5 Bags
5	Soil Tackifier - R1187 (20kg / Pail)	2 Pails = 40kg
6	Fertilizer (25kg / bag)	1 Bag = 25kg
7	Bio Green (25kg / bag)	1 Bag = 25kg
8	Seed Activator (1L / Container)	1 Container = 1 Litre

HYDROSEEDING MIX

(for hydroseeding tank capacity of 1500 litres)

- 
Pump water into hydroseeding tank to 3/4 level.
- 
Add in:
 - I. 12.5kg of Signal Grass seed
 - II. 2kg of Bermuda or Carpet Grass seed
 - III. 10kg of White Millet
 - IV. 5 bags of Paper Mulch
 - V. 2 pails of Soil Tackifier - R1187
 - VI. 25kg of Fertilizer
 - VII. 25kg of Bio Green
 - VIII. 1 container of Seed Activator
- 
Turn off the outlet valve and start hydroseeding tank engine.
- 
Let it mix thoroughly
- 
Top-up with water if needed.
- 
Turn on the outlet valve and begin application.

METHOD OF HYDROSEEDING APPLICATION

Before turning on the outlet valve, the person who will do the spraying must hold tight the nozzle and have firm footing on stable ground as he will expect a strong back-kick the moment the slurry shoots out of the nozzle.

Do not shoot the slurry directly to the soil surface. Instead, it should be done in the form of rain - drops in a uniform pattern. Ensure even coverage of slurry on soil surface. One machine load with proper application can cover approximately 800 m².

Watering (also in the form of rain –drops) on the hydroseeded areas can start immediately the next day and must be continued daily in the initial stage to ensure speedy germination and growth.

Note: Hydroseeding should never be applied during, before or immediately following rainfall. Avoid application in high winds. Machines and tools should be flushed with water immediately after use.



HYDROMULCHING

Hydromulching is basically the same process as hydroseeding but usually without the seed or fertilizer. This is typically done to a site that has had some form of dry seeding done, or used as a standalone mulch application for dust control or soil moisture retention. Hydromulching uses the same equipment as the hydroseeding process.

Hydromulching has proven to be very effective for the fast re-establishment and revegetation of large land areas, and commercial and constructions sites, and is especially effective on hillsides and sloping lawns, with immediate and effective erosion control and fast planting benefits.

Hydromulch is a formulation of wood fibre mulch, seed, fertilizer, water and a binding agent known as a tackifier, which is applied to the area to be revegetated using specialised broadcasting equipment, with the media being sprayed directly onto the surface at predetermined rates for effectiveness.

Hydroseeding is only suitable for broadcasting grass and other seeds, but is not recommended when coverage is required in harsh or dry conditions. It is highly recommended that hydromulching is carried out in preference to hydroseeding in this conditions. Hydromulching maintains moisture around the seed, decreasing seed mortality rates through the protective nature of the mulch, & accelerates growth & germination rates.



HYDROMULCHING APPLICATIONS

- | | |
|---------------------------------------|--|
| ✓ <i>Landscaping over large areas</i> | ✓ <i>Erosion control and dust suppression</i> |
| ✓ <i>Land subdivisions</i> | ✓ <i>Embankment and dam site stabilisation</i> |
| ✓ <i>Roadside rehabilitation</i> | ✓ <i>Commercial premises</i> |
| ✓ <i>Bridge abutments</i> | ✓ <i>Golf courses</i> |
| ✓ <i>Mine site revegetation</i> | ✓ <i>Mining sites</i> |
| ✓ <i>Construction sites</i> | |



HYDROTURF PRODUCTS

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SIGNAL GRASS
(*Brachiaria Decumbens*)

25kg NET

PRODUCT FROM AUSTRALIA
☎ 03-5192 1617 / 8

Hydro Turf Malaysia

No.4 Jalan Hujung Permatang Dua 26/25B,
40400 Shah Alam, Selangor Darul Ehsan
www.hydroseeding.my



SIGNAL GRASS SEED (Brachiaria Decumbens)

Packing : 25kg / bag

Signal grass is indigenous to Uganda and is currently being grown in many tropical to subtropical countries throughout the world. It forms a dense, high yielding sward which responds very well to additional nitrogen. It is a perennial grass with strong stoloniferous root system and, long trailing stems which will readily root down from their nodes. Signal grass is highly recommended for slopes erosion control and is widely used along most of our highways including the North-South Highway. Originally, signal grass was mainly used in the wet, humid tropics but in recent years is being grown over much wider climatic conditions due to its high persistence.

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BERMURDA GRASS
(*Cynodon Dactylon*)

25kg NET

PRODUCT FROM AUSTRALIA
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BERMUDA GRASS SEED (*Cynodon Dactylon*)

Packing : 25kg / bag

Bermuda grass is a warm season perennial grass introduced in the United States from the Indian Ocean-African region. Extensively creeping stolons and rhizomes enables the plant to establish a strong, deep and dense turf. Bermuda grass is adaptable to warm, humid and semiarid regions. It is often used for lawns, golf courses, athletic fields, parks & other turf areas.

We source seeds only from dedicated seedsmen with years of experience in the seed industry whose genuine commitment is producing superior quality seeds. We are proud to announce that these seedsmen have been working in partnership with us for the past 26 years.

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CARPET GRASS
(Axonopus Affinis)

25kg NET

PRODUCT FROM AUSTRALIA
☎ 012-8400 907

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CARPET GRASS SEED (*Axonopus Affinis*)

Packing : 25kg / bag

Carpet grass is primarily used for lawns or pastures that are comprised of moist / wet sandy soils, have low fertility and are moderately acidic (pH of 5.0 - 5.5). Carpet grass seeds produce grass for wet areas where no other grass will grow. This grass is a suitable grass for low maintenance areas such as airports, roadsides, and golf course roughs. Carpet grass perform best in full sun to slight shade & this grass also has the ability to withstand saturated soils and will tolerate periods of standing water. It is a good grass for erosion control and is a low maintenance grass on low fertility soils and can thrive if not mown without the addition of fertilizers. Carpet grass is native to higher rainfall areas. Irrigation of carpet grass will be required on dry soils or during periods of drought.

Note: Carpet grass has an aggressive, creeping growth pattern & will crowd out weeds & bermuda grass if established correctly.

CROP SEEDS

■ MUCUNA BRACTEATA (MB)

It grows fast and covers the field very quickly thus, it suppresses all weeds. It has the ability to produce three to four times more biomass than conventional leguminous cover crops besides helping to prevent the invasion of pest and diseases in the fields. Mucuna Bracteata is planted in the inter-rows of rubber and oil palm trees.



■ PUERARIA JAVANICA (PJ)

Pueraria Javanica is a very popular leguminous creeper and climber. The roots are shallow with plenty of root nodules. Quick establishment & covering the land in the first year of sowing is the attraction of this plant. It is a very popular cover crop worldwide especially in coffee, oil palm, citrus and rubber plantations.



■ CALOPOGONIUM MUCUNOIDES (CM)

It is a grazing and pioneer legume and one of the best cover crops. It is a twiner and creeper with tolerance for poor soils. The stems are succulent, covered with long, brown hairs while the root system is dense and shallow. The legume cuts off during dry months and it is a prolific seeder.



■ CALOPOGONIUM CAERULEUM (CC)

Calopogonium Caeruleum is a twining and creeping cover crop that becomes woody at maturity. It tolerates very well on poor soil. It has a rapid initial growth rate but slows down during dry weather as it grows better in cooler conditions. It is a prolific seeder and produces high biomass. It is also shade tolerant.



■ CENTROSEMA PUBESCENS (CP)

It is a herbaceous, perennial climber that can grow in shades. It is a slow grower, not tolerant to wet conditions and smothers other weeds. Stems grow and branch rapidly, producing a dense mass of branches and leaves on the soil. It is a deep-rooted plant and self-seeding takes place in this plant.



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SAMBAU PUTIH
MILLET WHITE

20KG

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HYDROTURF WHITE MILLET

Packing : 20kg / bag

In general, millets are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or grains for fodder and human food. Millets are important crops in the semiarid tropics of Asia and Africa, with 97% of millet production in developing countries. The crop is favoured due to its productivity and short growing season under dry, high temperature conditions.

Millet also plays a significant role in the hydroseeding process. HYDROTURF's white millet is used to attract birds to feed on the cereal crops instead of the bermuda or signal grass that is sown. This in turn ensures that the perennial grass sown for erosion control is unaffected. Besides that, the white millet also has a faster germination rate compared to the signal/bermuda grass hence providing a form of shade for the newly germinating perennial shoots. Although the white millet grows faster than the erosion control grass seeds, it is merely a temporary growth since the millet's lifespan only lasts anywhere from around 2-4 weeks.

HYDROTURF PRODUCTS



SOIL TACKIFIER - R1187

Packing : 20kg / pail

HYDROTURF Soil Tackifier is a medium size particle copolymer emulsion specifically designed for use as seeds, soil and mineral stabilization. It is an environmentally friendly product and is especially beneficial for stabilisation of seeds and soil on steep sloping areas and areas prone to erosion. The product is first mixed with water and then applied through any conventional spray system. For any successful stabilisation, a sufficient water rate is maintained to ensure the soil tackifier penetrates the soil surface, forms a three-dimensional stabilisation of soil particles which are bounded to each other and locks up soil particles with the product to prevent movement.

Soil Tackifier – R1187 is typically applied in hydroseeding area as seeds and soil stabiliser and as a dust control agent.

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FERTILIZER

25kg NET

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FERTILIZER

Packing : 25kg / bag

HYDROTURF fertilizer is a compound of nitrogen (N), phosphate (P) and potassium (K) designed to maximize crop yield and quality. Formulated to meet precise crop requirements, it is one of the most highly efficient sources of N, P and K available. Hence, when applied at the right rate and in the right conditions, it ensures the accurate and balanced uptake of these major nutrients into the crop. The product is a compound and therefore offers even distribution of nutrients whether spread by hand or machine on the field.

HYDROTURF fertilizer has a balanced nitrogen source, containing both nitrate-N and ammonium-N. Compared to pure ammonium or urea-based fertilizers, our products are significantly more effective on an equal nitrogen basis, therefore, giving better yields and quality. All phosphate in our fertilizer is fully plant available allowing greater and a longer lasting availability of phosphorus to crops over a wide range of soil types. The potassium in HYDROTURF's fertilizer stimulates growth of strong stems and provides disease and pest tolerance by increasing the thickness of the outer cell walls.

Contains: Nitrogen (N) - 15%, Phosphate (P) - 15% & Potassium (K) - 15%

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PAPER MULCH

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PAPER MULCH

Packing : 25kg / bag

Organic fertilizers are fertilizers that are derived from animal matter, animal excreta, manure, and vegetable matter (e.g. compost and crop residues). HYDROTURF's bio green fertilizer is specifically made up of chicken manure which significantly improves soil quality & crop yields.

In contrast, most fertilizers used in commercial farming are extracted from minerals or produced industrially. There are several benefits of utilising organic fertilizers for your agricultural or commercial usage. Due to the organic matter present in organic fertilizer, soil structure is improved and as a result the soil's ability to hold onto water and nutrients increases. Besides that, organic fertilizer is sustainable and environmentally friendly as they do not run off as easily compared to synthetic fertilizers that runoff into our waterways harming marine life and water quality. Next, although organic fertilizer can be more costly than synthetic, it always proves to be cost saving in the long term as it reduces the need for pesticides and the overall N, P and K requirements. One last point to note is that make sure you are selecting a product that is industry vetted and acknowledged such as HYDROTURF's organic fertilizers.

HYDROTURF PRODUCTS



PAPER PULP SHEET

Hydroseeding and mulching has been generally accepted as a modern economical method of establishing turf.

Paper pulp provides an excellent mulching medium. Water, soil stabilizer, paper pulp, seeds and fertilizer are mixed simultaneously in a hydroseeding machine which forms into a slurry and then applied to the soil. When the slurry is in the place on the ground, it provides a stabilization effect which prevents movement of seeds, mulch, fertilizer or soil either by wind or water.

Paper pulp provides a mat which follows the contour of the soil and keeps the seeds in moist condition for faster germination. Eventually, the mulch decomposes serving as humus which further improves the soil condition.

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BIO GREEN

25kg NET

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BIO GREEN

Packing : 25kg / bag

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HYDROTURF FIBER MULCH

Packing : 22kg / bag

HYDROTURF Fiber Mulch is an all-natural product coming straight from nature. This economical product is a shredded fir and pine bark mulch that provides all the mulching benefits in the landscape industry to beautify roadsides, homes and businesses. Fiber Mulch is a dense and moisture retaining product that bonds together, mats down and stays in place (great for windy areas and hillsides). With these great characteristics of the mulch, Fiber Mulch has been used as a natural weed barrier and for the use of erosion control or any other landscaping projects.

HYDROTURF PRODUCTS



HYDROTURF SEED ACTIVATOR

Packing : 1 litre / container

HYDROTURF's liquid seed activator is developed to enhance the germination and growth of sown seed. Formulated with over three dozen species of beneficial soil borne micro-organisms that provides the crop a greater germination, establishment, and growth.

This is achieved by immediate colonization of mycorrhizae fungi once the root radical has emerged from the seeds protective shell. The result is increased overall health, vitality, and growth from letting nature do the work. One of the few benefits of utilising our seed activator is an increased rate of seed germination and the activation of mineral solubilizing, enzyme producing, plant growth promoting and free-living nitrogen-fixing microbes. Lastly, the activator also establishes soil nutrient cycling around the seed and stimulates induced systemic resistance to stresses. The usage of our seed activators can be widely used in industries such as landscaping, farming, seeding and reclamation. Attain the highest germination success rate with our product!

HYDROTURF PRODUCTS



Paddy Straw



Coconut Fiber



Palm Fiber

HYDROTURF EROSION CONTROL BLANKET

Packing : 2metre (width) x 50metre (length) = 100m² / roll

HYDROTURF Erosion Control Blankets are effective in controlling erosion on slopes and channels, stabilizing soils long enough for re-vegetation seeding to establish on the site. Our blankets are designed to be used on gradual to steep slopes, with low to high velocity flow channels, and are available for both short term biodegradable applications, and long-term soil stabilization. Superior service and unbeatable pricing have elevated us to become the top erosion control blanket supplier in Asia.

HYDROTURF Erosion Control Blankets are offered in two different specifications namely the Double Net Straw Blanket and the Double Net Coconut Blanket. All fibers are woven into a three-D mensional pyramid matrix that facilitates growth and soil stabilization. HYDROTURF Erosion Control Blankets are one of the strongest available products and are often used with steep slopes, waterways, and arid climates. Offering long term control for demanding areas, these mats provide the strength and stability necessary for extreme conditions. Besides being designed to withstand high water flow and impact without loss of material to ensure maximum erosion prevention, the blankets also enhance plant growth and microbial activity in high water flow areas.

MACHINE AND EQUIPMENT SUPPLIES



HYDROSEEDING TANK

ENGINE

TD 23 > 2.3L (2289cc)
> 75 bhp @ 4300rpm
> 15.4kg

DETAILS OF TANKS

Dimensions of Container
1524mm x 1524mm x 1168.4mm
Thickness of Container - 3mm
Weight of Container - $0.024 \times 7000 = 168\text{kg}$

Volume of the Container - 1.56m^3
Weight of Container - $1.56 \times 1000 = 1560\text{kg}$
Weight of Container with 80% full = 1248kg
Weight of Engine and other components = 250kg

Total weight of loading = 1666kg
Total weight of truck without loading = 3390kg
Total weight of truck with loading = 5056kg

PUMP

Heavy Duty Centrifugal Pump
100m > Maximum Head
3600rpm > Max Speed

MACHINE AND EQUIPMENT SUPPLIES

Hydroseeding Hose

- Material : Canvas with inner rubber lining
- Length : 30 metres
- Diameter : 1.5 inch



Hydroseeding Nozzle

- Material : Aluminium
- Length : 32 centimetres
- Inlet Diameter : 30 millimetres
- Outlet Diameter : 15 millimetres
- High velocity pressure jet
- Removable head to unclog slurry



Hydroseeding Hose Coupling

- A pair comprises of male and female coupler
- Material : Aluminium with a Brass Swivel Nut
- Diameter : 1.5 inch
- Easy and secured to connect/disconnect by hand
- Fitted with rubber gasket for seal tight connection



Hydroseeding Hose Clip

- Size : 2A/50
- Diameter : 1.38 - 2 inch
- Material : Zinc plated mild steel







HYDR TURF

Owned by: Green Touch Asia Sdn. Bhd. (1354344-K)

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