

EEEK!TM

BIODEGRADABLE EROSION CONTROL PRODUCTS



eeek!TM - temporary erosion control products 100% photo-degradable (coir 300) and bio-degradable (450J).



What is eeek!TM Coir?

Coir (coconut fibre) usage has become widespread in various industries due to its versatility. Coir has established a remarkable reputation in horticulture, agriculture and erosion control as being superior to other available natural materials. Unlike agriculture and horticulture which have used coir for hundreds of years, coir is relatively new to erosion control and it may take some time before it is fully recognised.

Appreciation of coir in erosion control has resulted from the fact that it is an abundant and renewable natural resource with an

extremely low decomposition rate and high strength compared to other natural fibres. In ECB (erosion control blanket) applications, blankets made of coir are well known for superior performance compared to other organic blankets. The fast growth of environmentally concerned designers with their cutting edge bioengineering designs has increased coir use in erosion control.

Coir is typically processed from ripe coconut husks which are dark brown in colour and have been retted in freshwater for at least six months. The retting process acts as a curing process for fibres. Curing in freshwater increases resistance to UV (ultraviolet) degradation and also increases the flexibility of processed fibre without causing deterioration. During traditional processing, coconut fibre from cured husks is separated by skilled labour into grades depending on the length of fibre. The longer and stronger fibres are called bristle coir and the shorter and thinner fibres are called mattress coir.

Advantages of eeek!TM Coir as an erosion control material:

- ▶ Moisture absorption: factor 9 times its dry weight (900%)
- ▶ Retains humidity in the soil and atmosphere
- ▶ Slows discharge of water
- ▶ Excellent at reducing soil erodability
- ▶ Resists temperature and wind extremes
- ▶ Promotes and protects healthy growth of vegetation
- ▶ Biodegrades within time scale

- Poses no future problems for farmers, horticulturists or maintenance teams
- Protects against rain splash erosion and wind erosion
- Moderates extremes of temperature
- Protects against direct sun and desiccation
- Low cost

Areas of application:

- ▶ Over steepened slopes, road, rail embankments, industrial, mining restoration, earth dams
- ▶ Drainage channels, culvert outlets, washout drains and emergency water courses
- ▶ Highly erodible soils (embankments and sandy / silty soil areas, high gradient slopes)
- ▶ Badly compacted areas, junctions with civil engineering works such as bridge abutments and inaccessible areas
- ▶ Unpredictable or low rainfall areas
- ▶ Heavy rainfall areas
- ▶ Irrigated areas
- ▶ Channels, coastal and seashore protection
- ▶ Public and private parks, terraces, dams
- ▶ Golf courses
- ▶ Lawns - temporary reinforcement and protection
- ▶ Roads - temporary reinforcement

Outperforms and is more cost-effective than conventional erosion control methods including jute.

Composition:

eeek! is manufactured from 100% coir fibres which are held together by:

1. Coir 300 is held together using a Polypropylene (photo degradable) mesh and thread.
2. Coir 450J is held together using a Jute (100% bio degradable) mesh and thread.

eeek! PHYSICAL PROPERTIES

PROPERTY	VALUE	Ecoir 300	Ecoir 450J
Physical			
Mass (ASTM D5261)	g/m ²	320	460
Thickness (ASTM D5199)	mm	5	11
Tensile Strength (dry) (ASTM D4595)	kN/m	1.5 md, 1.1 cd	2.7 md, 1.6 cd
Tensile Strength (wet) (ASTM D4595)	kN/m	1.5 md, 1.1 cd	2.7 md, 1.6 cd
Grab Tensile (ASTM D4632)	N	95 md, 72 cd	101 md, 63 cd
Service Life	months	12 to 24	24 to 48
Performance			
Max. Design Shear Stress	Pa	87	143
Max Slope (Light Velocity Flows)		2H:1V	1H:1V
Max Slope (Moderate Velocity Flows)		3H:1V	1H:1V
Max Slope (Heavy Velocity Flows)		3H:1V	1H:1V

Roll Sizes

PRODUCT	SIZE
Ecoir 300 (coir mat with polypropylene mesh)	2.4 m x 50 m
Ecoir 450 (coir mat with jute mesh)	2.4 m x 30 m