PARAFIL® ropes consist of a core of closely packed, high strength aramid, PBD or high tenacity polyester fibres, lying parallel to each other, ensased in a protective polymeric sheath. This structure is combined with a specially designed termination technique.

PARAFIL® FEATURES

- High tensile strength
- High strength to weight ratio
- Low weight
- Tension fatigue resistant
- Good insulating properties
- Resistant to UV degradation
- Virtually maintenance-free
- Unaffected extreme conditions

PARAFIL™ CASE STUDIES

- Cabled Stayed Bus Station
  Cambridge, UK
- Cooling Tower Repair
  Thorpe Marsh, UK
- Cabled Stayed Bridge
  Aberfeldy, UK
- Pre-Stressing Tendons
  Ontario, Canada
- Pre-Stressing Tendons
  Tring, UK
- Antennae Support Guys
  Canada
- Antennae Support Guys
  HMS Forest Moor, UK
- Launch Ties
- Guard Rail
- Catenary Support

PARAFIL® is the original parallel laid fibre synthetic rope which was first conceived and manufactured in 1967. The parallel fibre structure ensures that PARAFIL® ropes have high strength and modulus characteristics coupled with excellent tension-tension fatigue performance and low creep.

PARAFIL® ropes have termination end fittings which were specifically designed by Linear Composites Limited in conjunction with Cambridge University, to maximise the rope efficiency. It is essential that LCL termination fittings are used with PARAFIL®. LCL terminations are designed and constructed from the highest quality materials which are machined to precise dimensions and tolerances. By using LCL termination fittings customers can be confident that the PARAFIL® will perform to the properties detailed within the company’s literature. PARAFIL® and LCL terminations have a proven 40 plus year performance in a vast number of end uses.

PARAFIL® ropes are today used throughout the world mainly in Catenary Support Systems, Urban Transport Systems, Sub-Sea, Military, Marine and Structural applications. PARAFIL®, due to its versatility is also used in many other applications. PARAFIL® is the NATO specified guardrail material used by the Royal Navy on the British fleet. PARAFIL® is also the material of choice for guardrail on RNLI lifeboats.

Its benefits, when compared to metallic/synthetic alternatives, include a high strength-to-weight ratio, excellent chemical resistance, high UV resistance, excellent fatigue characteristics and stability over a wide temperature range. The unique method of manufacture produces a rope with a diverse blend of physical and chemical characteristics.

A choice of combinations of strength, core fibre and sheath are available to meet the requirements of a wide variety of applications.

PARAFIL® TYPES

PARAFIL® is constructed from five standard fibre types. However, each of these is available with a choice of polymeric sheaths to suit varying applications. These include a specially formulated polyethylene, which is suitable for most applications (sheath material A), an EVA copolymer that is more flexible and stress-crack resistant (sheath material C) and a polyester elastomer that offers higher resistance to heat and abrasion (sheath material H). A flame retardant, cross linked polymer sheath is also available (sheath material X).

Standard PARAFIL® synthetic rope and cable range

<table>
<thead>
<tr>
<th>Yarn</th>
<th>Polyethylene</th>
<th>Polyethylene/ Vinyl Acetate Copolymer (EVA)</th>
<th>Polyester Elastomer</th>
<th>Flame Retardant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester</td>
<td>Type A</td>
<td>Type A/C</td>
<td>Type A/H</td>
<td>Type A/X</td>
</tr>
</tbody>
</table>

Table showing standard PARAFIL® synthetic rope and cable range.
Past experience has shown that LCL’s unique manufacturing process have a positive net impact upon the Young’s Modulus of the fibres contained within PARAFIL®.

The full technical properties and performance parameters for PARAFIL® synthetic ropes and cables are available to download in the secure login area.

PARAFIL® Terminations

Terminations are available for all standard and non standard types of PARAFIL®. Generally, terminations supplied are made from the following materials; Aluminium Alloys, Sheradised Mild Steel and 316L Stainless Steel.

Terminating instructions are available in the secure login area.

Please be aware that Linear Composites Ltd cannot guarantee the performance of its PARAFIL® rope with non LCL terminations, supplied by other manufacturers.

PARAFIL® applications

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