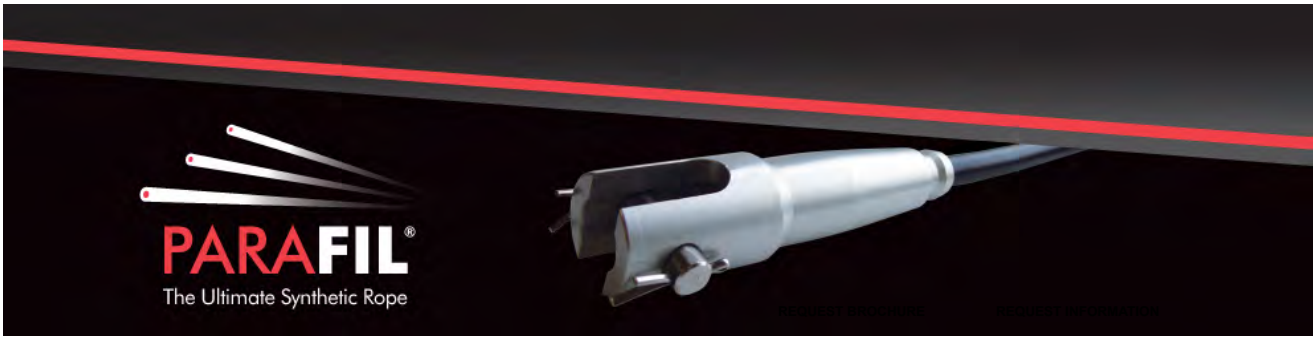

PARAFIL® ropes consist of a core of closely packed, high strength aramid, PBO or high tenacity polyester fibres, lying parallel to each other, encased in a protective polymeric sheath. This structure is combined with a specially designed termination technique.

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 Suport Guys
Canada

Antennae Suport Guys
HMS Forest Moor, UK

PARAFIL
Launch Ties

PARAFIL
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

		Sheath		
Yarn	**Polyethylene**	**Polyethylene/ Vinyl Acetate Copolymer (EVA)**	**Polyester Elastomer**	**Flame Retardant**
Polyester	Type A	Type A/C	Type A/H	Type A/X

Eurotunnel

Urban
Transport Systems

PARAFIL Subsea
Arch Riser Teather

TECHNICAL DATASHEETS
SECURE LOGIN

REQUEST A
SAMPLE CARD

Standard Modulus Aramid	Type F	Type F/C	Type F/H	Type F/X
High Modulus Aramid	Type G	Type G/C	Type G/H	Type G/X
PBO	Type Z	-	-	-
Technora	Type T	-	-	-

Yarn Type	Tensile Strength Standard Range (kN)	Extension at NBL (%)	Outer Diameter (mm)	Elastic Modulus (kN/mm2)
A	3 - 2,500	6	4 - 99	9.8
F	7.5 - 3,000	2.5	4 - 66	77.7
G	7.5 - 3,000	1.5	4 - 66	125.8
Z	390 - 2,400	1.5	17 - 41	270*
T	30 - 3,000	3.5	8.5 - 66	71**

*Value taken from ZYLON® PBO fibre manufacturer.
**Value taken from TECHNORA® fibre manufacturer.

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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