

## **High Quality Flexible Nylon Mandrels for multi-spiral wire reinforced hoses**

Bell Plastics Ltd is pleased to introduce flexible nylon mandrels for the manufacture of 4-wire spiral rubber hoses (Types 4SH & 4SP) and for 6-wire spiral rubber hoses.

- ❖ No internal voids/holes which means no weak spots, necking or unexpected breakages = reduced spiral hose scrap
- ❖ High tensile strength capable of withstanding high spiral wire carrier tensions = stability at the spiralling point & improved spiral hose quality
- ❖ Available in long lengths = reduced processing costs and improved length patterns (limited by steel mandrel)
- ❖ Flexible mandrel production = less factory space required and greater throughput when compared to rigid steel mandrel production
- ❖ Very tight diameter tolerance = high quality & consistent hose internal diameter
- ❖ Long lifespan = low mandrel cost
- ❖ Broad range of mandrel diameters available (5mm – 50mm) = capable of meeting all hose diameter needs
- ❖ Variety of colours available = simple differentiation between mandrels reduces process mistakes
- ❖ Suitable for braided hose = reduce number of mandrel types
- ❖ Available in a variety of flexible grades = meets all your needs



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# BELL PLASTICS LTD

## Product Range: FLEXIBLE MANDRELS

Bell Plastics' high-quality, flexible nylon (polyamide) mandrels help hose-makers to achieve lower production costs and higher quality hoses.

By using a patented process, Bell Plastics' mandrels are completely free from internal voids, have high tensile strength suitable for even the most demanding of applications and have highly accurate and consistent diameters with low ovality. For the hose manufacturer, this means easier mandrel extraction, more accurate hose ID's and fewer hose rejects.

Nylon mandrels are available in a variety of grades, meeting your flexibility and tensile strength requirements.

Nylon mandrels are also easy to extract and are compatible with a wide variety of materials used during the hose manufacture process.

Mandrels can be made to customer specification, in all diameters from up to 50mm (2"). They can be supplied in coils or on drums and are carefully packed for protection during transit. Continuous lengths of up to 2,500m are possible for smaller diameters.

### Summary of properties: Nylon mandrels

<b>Materials</b>	Flexible nylon (polyamide) – Type K, Type R
<b>Diameter range</b>	3 - 50mm / 1/8th - 2"
<b>Diameter tolerance</b>	+/- 0.10mm to +/-0.25mm depending on size
<b>Supplied form</b>	In coils or wound on customer drums
<b>Coil length</b>	Up to 2,500m for smallest diameters
<b>Melting point</b>	212°C
<b>Tensile modulus*</b>	550Mpa (type K) / 380Mpa (type R)

- mandrel conditioned in air with 50% relative humidity at 23°C

Please contact Bell Plastics to discuss your mandrel requirements in more detail, or for further technical information. We would also be pleased to offer production trials, quotations and technical support.

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## Product Range: FILMS

Bell Plastics' range of high-performance UHMWPE and XLPE protective films offers solutions for the most demanding hose applications, where high resistance to chemicals or abrasion are required.

- ✓ Chemical resistance
- ✓ Abrasion resistance



### UHMWPE

Our UHMWPE (Ultra High Molecular Weight Polyethylene) film has outstanding wear resistance and low friction, making it an excellent choice for protective hose coverings. Its high resistance to a wide range of chemicals and solvents makes it suitable for lining fluid transport hoses. Its very low odour, FDA approval and ability to withstand steam sterilisation makes UHMWPE suitable for a wide range of food, beverage and pharmaceutical applications.

Our UHMWPE range includes natural, black and electrically-conductive grades. We offer a range of thicknesses from 0.1mm up to 0.5mm and higher, and widths to suit customer requirements from under 10mm to 200mm or more.

Standard sizes are available from stock, or we are happy to supply film according to customer specification of width, thickness, roll size and core type

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## **XLPE**

Bell Plastics XLPE (cross-linkable polyethylene) offers similar chemical resistance to UHMWPE and is softer and more flexible, making it an ideal material for lining industrial hoses. Available in natural, black and coloured forms, Bell Plastics XLPE is manufactured according to customer specifications of width, thickness, roll size and core type.

Please contact Bell Plastics to discuss your film application and requirements in more detail. We will be pleased to help with data sheets, product samples, quotations and technical support.

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