Knitted Mesh Rolls

Leaders in Mesh Engineering & Innovation



Protecting People, Property and our Planet

What is knitted mesh

Knitted wire mesh is based on the same principles as garment knitting, but is produced using specialised machinery. Initially formed as a cylinder, the knitted material is rolled to produce a lay-flat sock which can vary in width from 6mm to 1000mm. The material has interlocking asymmetrical loops of wire which facilitate movement (or stretch) in both a horizontal and vertical direction. Each loop is shaped like a small spring and this feature enables high levels of resilience. Mesh can be used in its original (flat) form or further processed by layering, folding, coiling, stitching or compressing. A commonly used process is to crimp metal mesh by passing it through special rollers to produce a diagonal or herring-bone pattern. This gives the mesh additional depth, usually of between 4mm and 8mm.

Materials

Almost any material that can be drawn into a wire or a filament can be used to produce a knitted mesh. The most commonly used wires, filaments and yarns are listed in the table below. Should the material required not be shown then please contact us direct. Round wires from 0.11mm to 0.35mm diameter are most commonly knitted, but for special applications it is possible to knit wires with diameters as small as 0.03mm or as large as 0.8mm. Flattened wires and multifilament knitting can be used to increase surface area.

Stainless Steel grade 304, 316, 321, 310 & 310S	Tin Plated Copper Clad Steel
Galvanised Steel	Mild Steel
Monel*	Copper
Aluminium	Tinned Copper
Nickel Plated Copper	Silver Clad Copper
Phosphor Bronze	Brass
Nickel	Inconel* 600 & 601
Incoloy* DS & 825	Molybdenum
Titanium	Hastelloy*
Fecralloy Δ	Platinum
Silver Alloy	Alloy 20
Hostaflon≠	Teflon FEP
Glass Wool	Polypropylene
Kevlar∞	Silica Yarn

* Monel, Hastelloy, Incoloy and Inconel are registered trade marks of Special Metals Corporation, USA. †Teflon is a registered trade mark of DuPont, USA | ≠ Hostaflon is a registered trade mark of Hoechst, Germany. Δ Fecralloy is a registered trade mark of Kanthal AB | ∞ Kevlar is a registered trade mark of DuPont, USA.



Features & Benefits

- High temperature and corrosion resistance
- High electrical and thermal conductivity
- Provides protection in abrasive environments
- Flexibility and strength
- Density, free volume and surface area easily varied to suit application
- Good recovery characteristics under load



Applications

- Anti-vandal protection for public transport seating
- Coverings for ceramic fibre rope and blankets
- Filtration media
- RFI shielding tapes and gaskets
- Automotive catalytic converters
- Vibration and sound reduction
- Heat transfer media
- Cleaning mesh for extrusion equipment

All-metal mesh

Mesh is usually specified by the number of stitches per cm. The range of meshes is considerable but for practical purposes these are from 0.5 stitches per cm to 6 stitches per cm. Meshes can be grouped into five broad categories that are suitable for the majority of products and applications: fine, medium-fine, standard, coarse and super-coarse. Using various filament diameters and mesh sizes, along with different crimping, calendaring, folding, layering and rolling processes, the product scope is almost unlimited.

Plastic & fibre mesh

Knitted mesh can also be produced in polymeric (plastic) and other fibre types including: polypropylene, Hostaflon, Teflon, glass, wool and silica yarn.

The figures given for the number of stitches per cm are only approximate, as many variables can significantly affect the stitch size. Filaments for fine meshes are circular in section. However for standard, coarse and extra coarse meshes we can flatten the circular section filaments in order to increase surface area and the finished product's abrasion resistance. The table opposite shows only the most commonly used meshes. A more comprehensive range is available and we have the equipment and know-how to knit various extruded monofilaments, as well as multifilament or spun fibres. Our Technical Department will be pleased to help if you have any queries.

Fine Mesh

Typical wire diamet
0.05 - 0.15
Typical number of s per cm on length
3.5

Medium Fine MeshTypical wire diameter (mm)Range0.1540-63Typical number of stitches
per cm on lengthTypical
cm acr2.43.5

Standard N
Typical wire diamete
0.2 - 0.35
Typical number of st per cm on length
1.6
lypical number of st per cm on length 1.6

Coarse Me
Typical wire diamete
0.2 - 0.35
Typical number of st per cm on length
1.6

per cm on length

0.5

Super Coarse MeshTypical wire diameter (mm)Range of0.4 - 0.6330 - 3Typical number of stitchesTypical

er (mm)	Range of natural width (mm)	
	6 - 165	
titches	Typical number of stitches per cm across lay flat	
	4.4	

er (mm)	Range of natural width (mm) 40-635	
titches	Typical number of stitches per cm across lay flat	
	3.5	

1esh

er (mm)	Range of natural width (mm)	$\neg \bigcirc \bigcirc \bigcirc$
	30 - 1000	THAT
titches	Typical number of stitches per cm across lay flat	
	1.9	THAT

esh

er (mm)	Range of natural width (mm) 30 - 550	
titches	Typical number of stitches per cm across lay flat	
	0.74) ()

er (mm)	Range of natural width (mm) 330 - 350	
titches	Typical number of stitches per cm across lay flat	
	0.5	

For more information on any of our products, please don't hesitate to contact us

Customer Support

Tel: +44 (0) 1352 717 600 Email: sales@knitmesh.com Fax: +44 (0) 1352 714 909 Coast Road, Greenfield, Flintshire, CH8 9DP, United Kingdom

All specifications are correct at time of print, are for guidance purposes only and subject to change without prior notice.



Protecting People, Property and our Planet