



**LEADERS IN  
MESH ENGINEERING  
AND INNOVATION**

 **KnitMesh<sup>®</sup>**  
Enhanced Engineering Materials

**KNITTED MESH ROLLS**

## WHAT IS KNITTED MESH?

Knitted wire mesh is based on the same principles as garment knitting, but is produced using specialised heavy-duty 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 can move relative to one another, allowing sideways and lengthways stretch. Because each loop is bent like a small spring this also provides high 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 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. However please contact us if the material you need is not shown. Round wires from 0.11mm to 0.35mm diameter are most commonly knitted, but for special applications it is possible to knit wire as small as 0.03mm or as large as 0.8mm in diameter. Flattened wires and multi-filament 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 <sup>Δ</sup>	Platinum
Silver Alloy	Alloy 20
Hostafion <sup>†</sup>	Teflon FEP <sup>†</sup>
Glass Wool	Polypropylene
Kevlar <sup>×</sup>	Silica Yarn

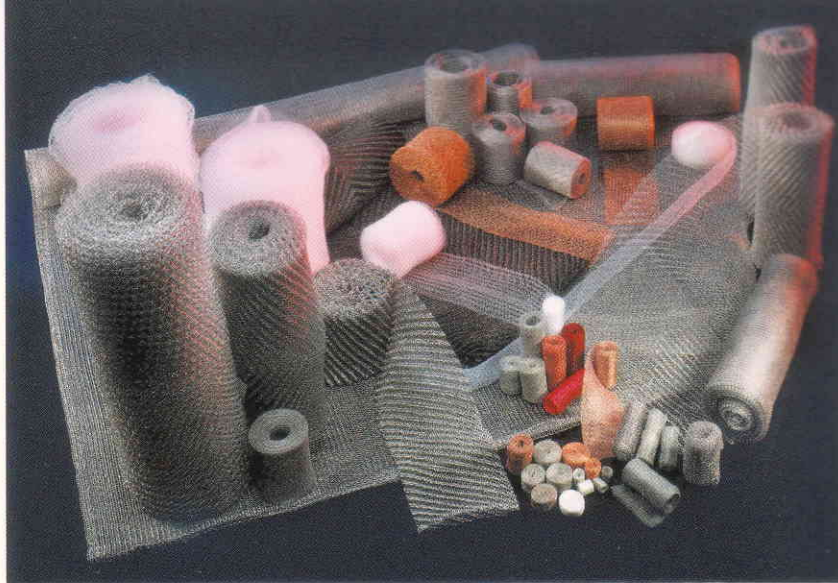
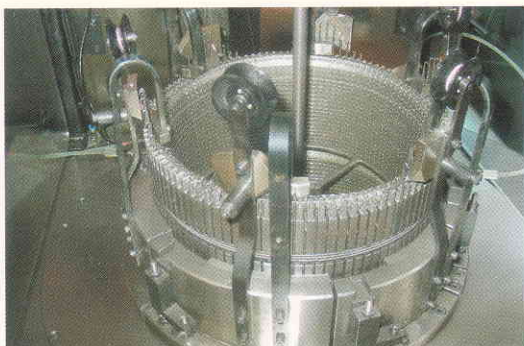
\* Monel, Hastelloy, Incoloy and Inconel are registered trade marks of Special Metals Corporation, USA.

† Teflon is a registered trade mark of DuPont, USA.

≠ Hostafion 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.

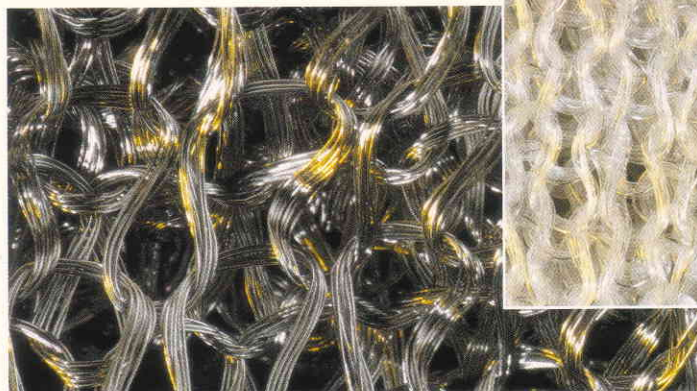
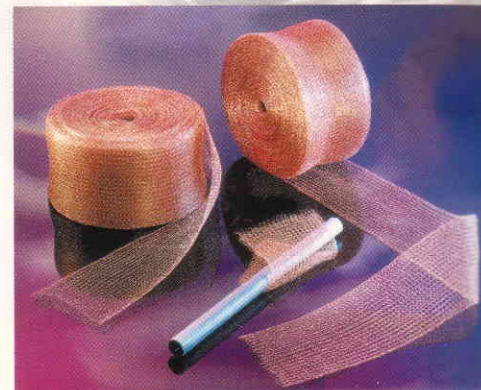


## FEATURES & BENEFITS

- 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



# METAL MESHES

## 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: fine, medium-fine, standard, coarse and supercoarse, but these divisions can cover a wide range of products. Using various filament diameters and mesh sizes, along with different crimping, calendaring, folding, layering and rolling processes, the product scope is almost unlimited.

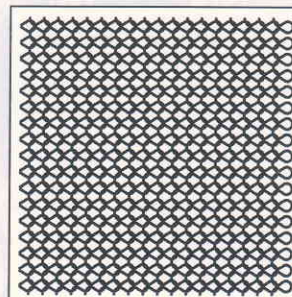
## Plastic and fibre mesh

Knitted mesh can also be produced in plastic and other fibres – the most commonly used being polypropylene, Hostafon®, 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 use circular section or flattened section filaments which increase the surface area. The table opposite shows only the most commonly used meshes. A more comprehensive range is available, and we can knit various extruded monofilaments as well as multifilament or spun fibres. Our Technical Department will be pleased to help if you have any queries.

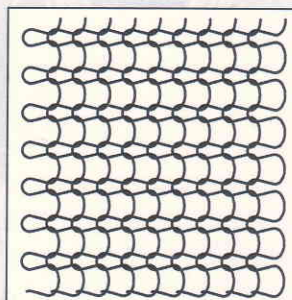
## FINE MESH

Typical wire diameter (mm)	Range of natural width (mm)
0.05 - 0.15	6 - 165
Typical number of stitches per cm on length	Typical number of stitches per cm across lay flat
3.5	4.4



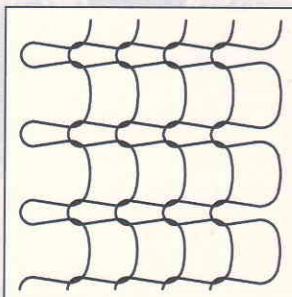
## MEDIUM-FINE MESH

Typical wire diameter (mm)	Range of natural width (mm)
0.15	40 - 635
Typical number of stitches per cm on length	Typical number of stitches per cm across lay flat
2.4	3.5



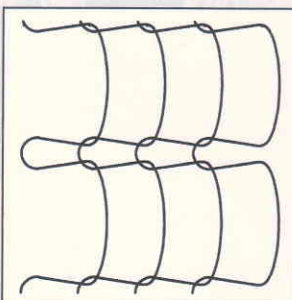
## STANDARD MESH

Typical wire diameter (mm)	Range of natural width (mm)
0.2 - 0.35	30 - 1000
Typical number of stitches per cm on length	Typical number of stitches per cm across lay flat
1.6	1.9



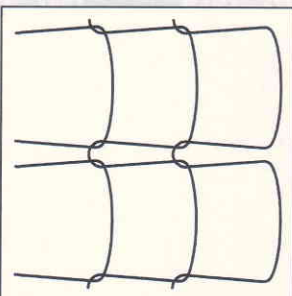
## COARSE MESH

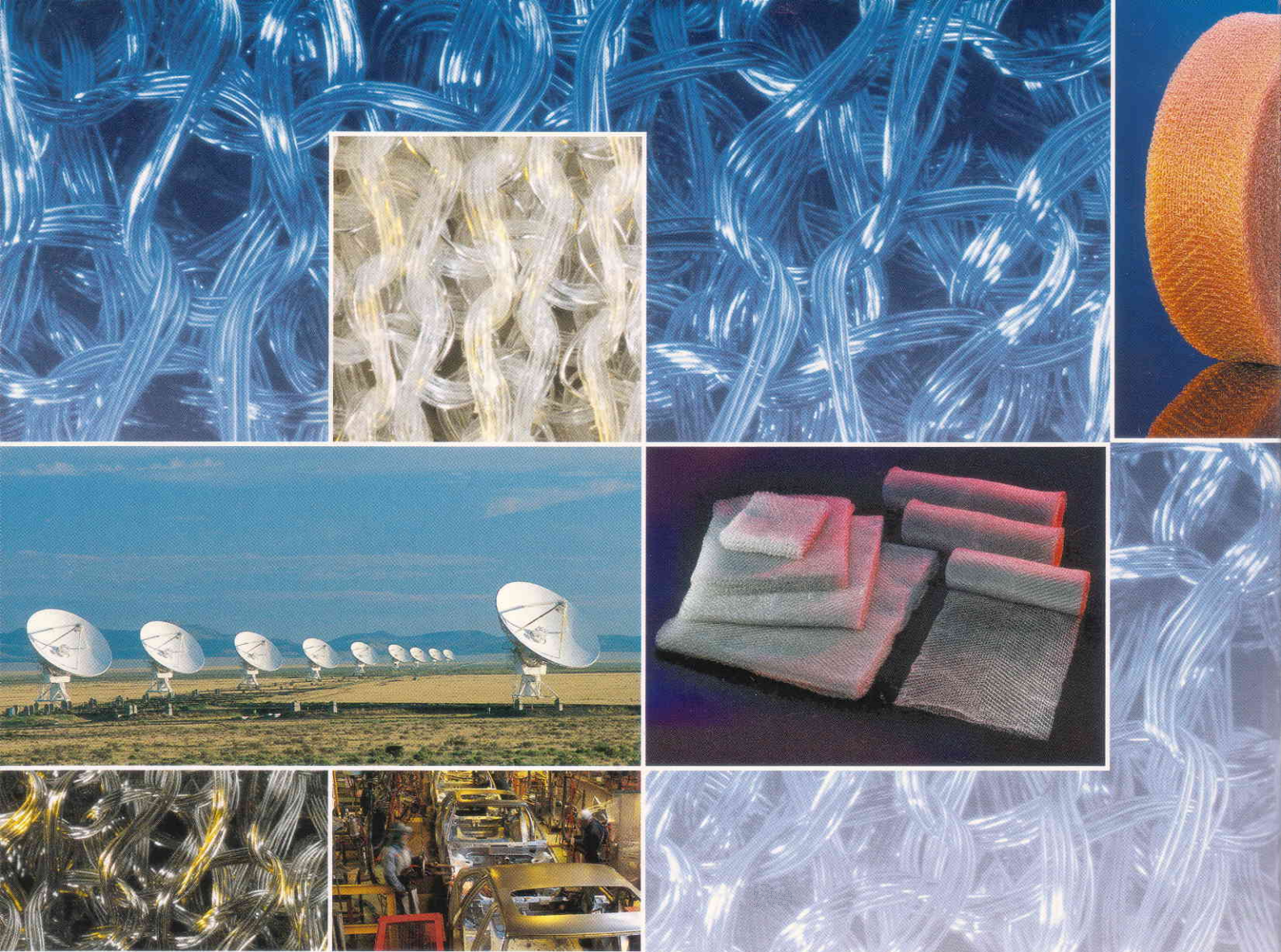
Typical wire diameter (mm)	Range of natural width (mm)
0.2 - 0.35	30 - 550
Typical number of stitches per cm on length	Typical number of stitches per cm across lay flat
1.6	0.74



## SUPER COARSE MESH

Typical wire diameter (mm)	Range of natural width (mm)
0.4 - 0.6	330 - 350
Typical number of stitches per cm on length	Typical number of stitches per cm across lay flat
0.5	0.5





## QUALITY

KnitMesh is dedicated to manufacturing high quality products at competitive prices, with zero defects. Approved to BS EN ISO 9001 in 1992, our commitment to continuous quality improvement was rewarded in 1999 with environmental standard BS EN ISO 14001 approval. In August 2005 approval to ISO/TS 16949 was achieved enabling us to combine cost-efficient production with minimum impact on the environment.



TS 16949 registered No. TS 99960-000  
& OHSAS 18001:1999 registered No. OHS 509770



ISO 9001:2000 registered No. FM 75199



ISO 14001:2004 registered No. EMS 45798

## DELIVERY AND SERVICE

KnitMesh Ltd has been supplying knitted mesh products for over 40 years to OEMs and first and second tier customers throughout the world. Advanced production technology allows cost-efficient production and consistently high quality, ensuring long term reliability. Our head office, research, development and engineering departments together with manufacturing facilities are located in North Wales. In 2006 KnitMesh South Africa (Pty) Ltd was established in Port Elizabeth, primarily to support the South African automotive industry. Additional local support is also provided by a worldwide network of agents and distributors. Visit our website, [www.knitmesh.com](http://www.knitmesh.com) for all contact details and further product information.

**KnitMesh®**  
Enhanced Engineering Materials

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