

NEW TEXTILES

CONDUCTIVE TEXTILES

MAS 962, E14-525

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Wednesdays 1-4pm and Fridays 2-3pm

<http://newtextiles.media.mit.edu/>

Conductive thread or “yarn”



Conductive yarns: metal wrapped

- Fabric core wrapped with metal
- Highly conductive
- Beautiful
- Fragile
- Sewability: not machine sewable



Conductive yarns: metal plated

- Fabric core plated with metal (most commonly silver)
- Reasonably conductive
- Plating tarnishes and cracks with washing and wear
- Silver can be polished
- Sewability: some varieties machine sewable

Conductive yarns: spun metal fibers or filaments

- Different metal/fabric blends
- 100% stainless steel
 - Highly conductive
 - Corrosion resistant
 - Difficult to work with
- Stainless/wool and stainless/polyester blends
 - Resistive
- Sewability: some varieties machine sewable as bobbin thread

Conductive yarns: stranded wire

- 100% metal core
- Highly conductive
- Insulated
- Contact points need to be stripped and soldered
- Stripped wire vulnerable to breakage
- Sewability: some varieties machine sewable as bobbin thread

Conductive fabrics



Fabrics constructed with conductive yarns

- Most are highly conductive
- Beautiful
- Sometimes useful weaves (ie: lines)
- Often very expensive



Conductive fabrics: metal plated

- Traditional cloth plated with metal
- Common platings
 - Copper
 - Tin
 - Nickel
 - Silver
- Most are highly conductive

