Specialty Tape Solutions

Bringing better ideas to the surface with metal foil, vinyl, polyester, and specialized tapes
3M™ Metal Foil Tapes – choice of conformable high performance backings

Typical Applications

- Aircraft paint stripping  •  Metal plating masking
- Dust/moisture cover  •  Heat-resistant wiring harness
- Sound and vibration damping
- Enhance cooling efficiency of copper refrigeration coils
- Electronic, appliance, transportation and manufacturing equipment.

3M™ Aluminum Foil Tapes

- Resist flame, moisture, weather, UV degradation, and most chemicals
- Thermally conductive for heating/cooling efficiency

3M™ Lead Foil Tapes

- Electrically conductive
- Acid resistant for plating
- Radiopaque for X-ray markers

3M™ Aluminum Foil Reinforced Tapes

- Flexible flame-resistant wrap for wires and hoses
- Tear and puncture resistant

3M™ Damping Foil Tapes

- Viscoelastic polymer with aluminum constraining layer to help quiet metal and plastic
- Self-fixturing

3M™ Vinyl Tapes – locked-in color and aggressive adhesive that removes cleanly

Typical Applications

- Mark and identify lanes, hazards, and safety equipment
- Color code piping, tools, instruments, and more.
- Seal riveted seams • Add decorative trim • Electroplate masking
- Fine line paint masking

Typical Characteristics

- “Color-throughout” construction that resists scrapes, wear, weathering, and chemicals
- Black, blue, brown, green, orange, red, white, purple, yellow, and transparent
- Aggressive pressure sensitive adhesive bonds and seals to most surfaces on contact
- Easy, clean removal for temporary applications
- Readily stretch, mold, form, press, or cut to fit
- Conforms to irregular surfaces
- Provides sharp masking edge
**3M™ Slick Surface Tapes** – low coefficients of friction with choice of other characteristics

- Typical Characteristics
  - Choice of backing calipers from as thin as 0.9 mil up to 5 mils
  - Choice of tensile strength ranging from 20 lbs./in. (1 mil backing) to 127 lbs./in. (5 mils backing)
  - Choice of pressure sensitive acrylic, rubber, silicone, and S/R blend adhesives to meet specific requirements. For example, acrylic for long term holding and clarity; silicone for high temperature performance and clean removal; specially-formulated rubber for resistance to plating chemicals
  - Polyester backings perform reliably exposed to 350°F (177°C) for one hour

**3M™ Polyester Tapes** – thin caliper with long-term high dimensional strength

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**3M™ UHMW-PE Tapes**
- Abrasion resistant to protect chutes from wear
- “Slip plane” effect between surfaces to reduce noise
- Anti-stick for ready release and clean-up of various inks, adhesives, and sealants
- Available in film and film/foam

**3M™ PTFE Tapes**:
- Self-lubricating to help improve web material processing
- Resists up to 400°F (204°C)
- Anti-stick for ready release and clean-up of even hot plastic
- Conforms for a chemical-resistant barrier
- Available in glass cloth and skived or extruded films

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**Typical Applications**
- Protect plastic contact bar under hot wire in shrink wrapping
- Wrap web rollers for smoother material movement; cover web former edge to minimize friction during folding
- “Slip plane” between dissimilar surfaces to help reduce noise
- Masking and bundling in composite part manufacturing

**Typical Applications**
- Stripping positives or negatives in graphics arts pre-press
- Splicing silicone-treated papers • Powder coat paint masking
- Gold finger masking in PCB plating • De-taping
- High temperature coating • Edge and hole reinforcing
- Thin caliper butt splicing • Add low profile decorative trim

**Example:**
- 3M™ PTFE Extruded Film Tape 5490 to resist sticky build-up on rollers and plates
- 3M™ Polyester Tape 396 with fast grip rubber adhesive for splicing low surface energy materials

**KEY MARKETS**
- Printing
- Aerospace
- Automotive
- Maintenance and Repair (MRO)
- Graphic arts
- Photographic
- Electronics
- Metal finishing
Variety of other 3M™ Tapes for process and design solutions

3M™ Glass Cloth Tapes
- Typical applications: thermal spray masking; splicing fabric and other textured surfaces; aircraft cargo hold seaming and sealing
- Tensile strength up to 190 lbs./in. and 7x higher than typical polyester tapes
- Temperature resistance up to more than 400°F (204°C) for one hour – even higher for intermittent exposures
- Passes FAA flame resistance regulations

3M™ Riveting Tapes
- Hold rivets during bucking without trapping
- Choice of 1.0 mil polyester with rubber adhesive, or 2 mil polyethylene with acrylic adhesive

3M™ Venting Tapes
- Acrylic adhesive and non-woven, air-permeable backing holds foam-in-place insulation inside doors and appliances

3M™ Lithographer’s Tape
- Ruby red transparent UPVC backing is visually translucent, yet photographically opaque for lithographic stripping
- Rubber adhesive is long aging and transfer-resistant

3M™ Specialty Tapes
- Unique backings and adhesives for a wide range of applications and characteristics such as the following and more:
  - Silicone butt splicing
  - Tedlar® Film backing for weather resistance
  - Silicone rubber backing for high friction rollers
  - Adhesive-less PTFE tape for pipe thread sealing

Typical Applications
Wide variety from glass cloth tape for fabric splicing to adhesive-less PTFE tape for pipe thread sealing. See specific tapes at right for typical applications and characteristics.

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