

3M Application Profile: Electroplating



Racks of parts being placed in a chemical electroplating bath.

Application Description:

A layer of metal is deposited onto a surface by immersion in a chemical bath and exposed to an electrical current. Duration time can vary depending on the required thickness of metal coating.

Application Benefit:

- Metal surface provides a protective decorative finish, but also protects parts from abrasion and corrosion.



3M™ Vinyl Tape 471, shown here in yellow, can be used to mask part areas prior to a chemical bath, then removed cleanly upon process completion.

Key Application Requirements:

- The selected tape needs to hold reliably to a variety of surfaces, such as plastic, steel, and aluminum.
- The tape helps protect parts from water and heavy metal and increases its ability to withstand electrical voltages.
- After processing, the tape needs to remove cleanly and provide crisp lines.

Tape Benefits:

- **Increased throughput:** Eliminates additional application skills. Doesn't require a 24 hour cure time like many liquid maskants
- **Minimum rework:** Decreases rework and labor required
- **Fast, clean removal:** Reduces time required to remove and/or clean surface after use
- **Line definition:** Provides distinct, straight lines for aesthetics
- **Customizable (Lined product):** Creates part specific shapes or sizes quickly and easily

Products	
3M™ Lead Foil Tape 420/421	
3M™ Electroplating Tape 470	
3M™ Vinyl Tape 471/4712	
3M™ Electroplating/Anodizing Tape 484	
3M™ Aluminum Foil Tape 425	
3M™ High Temperature Aluminum Foil Tape 433	
Additional Applications	
Aerospace	Landing gear
Automotive	Brake pads & emblems
Electronics	Circuit board & phone case
Oil & Gas	Couplings & threads



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