

# CHR® Pressure-Sensitive Adhesive Tapes

## Electrical Insulation and Isolation

### Film Insulation

Polyester film tapes are produced from electrical grade strength, high quality, optically pure film with consistent, minimum dielectric resistance of 5kV for 1.0-mil, 7.0kV for 2.0-mil and 10kV for 5.0-mil tapes, regardless of adhesive type or insulation class.

Polyimide film tapes, made from thermally produced, oriented film, offer distinct advantages over polyester film: higher dielectric strength and higher temperature resistance. PI film of 1.0 mil offers 6.5kV, 2.0-mil film is rated at 10.0kV and 5.0-mil film delivers the ultimate one-wrap dielectrics of 17.0kV.

PTFE-based films provide economical resistive qualities and non-stick properties important in many wire and cable applications. Dielectric strength varies with media density, but generally 2.0-mil film offers 7.5kV, 3.0-mil film is rated at 10.0kV and 5.0-mil PTFE film delivers around 13.0kV of electrical resistance.

### Fabric Insulation

Woven fiberglass cloth has traditionally been an excellent insulation material for harnesses and coil winding in motor assemblies. Available in a standard 7.0-mil-thick package and heavy duty grade at 10.0 mils, adhesive selection allows the user to bridge insulation classes from 130°C (rubber adhesive) to 200°C (silicone adhesive).

### Foil Isolation

Both aluminum foil and copper foil make superior electromagnetic and radio frequency absorption and isolation media due to their natural conductivity, flexibility and malleability. Coated with adhesives to enhance conductivity and thermal management, these CHR tapes are frequently used in end connectors and shielded cabinets and devices.

*CHR® tapes for electrical insulation applications center around dielectric strength and operating temperature. Whether it's coil winding, end tabbing, outer wrapping, harness protection or potting cable ends, these tapes cover most of the demanding industrial electrical needs. Electrical isolation is mostly about conductivity. Saint-Gobain Performance Plastics produces a variety of foil tapes formulated to shield your most important electrical cables, cabinets and individual components.*

### Features/Benefits

- Prevents Plating Solution Undercutting
- Stands Up to Multiple Operating Cycles
- No Re-work Required
- No Adhesive Residue
- Greater Operator Safety
- Excellent Temperature and Chemical Resistance



Coil outer wrap taping



EMI-RFI copper tape shielding

| Temperature | Insulation Class | Material             | Adhesive |
|-------------|------------------|----------------------|----------|
| 130°C       | B                | PET, PI, Glass, PTFE | Rubber   |
| 155°C       | F                | PI, Glass, PTFE      | Acrylic  |
| 180°C       | H                | PI, Glass, PTFE      | Silicone |
| 200°C       | N                | Glass                | Silicone |

UL Guide OANZ2, UL 510, file E51201 and E66639

## CHR® Pressure Sensitive Adhesive Tapes — Electrical Insulation and Isolation

| Part Number | Color    | Adhesive      | Backing Thickness<br>mil (mm) | Total Thickness<br>mil (mm) | Dielectric<br>kV | Elongation<br>% | Tensile<br>lbs./in. (kg/cm) |
|-------------|----------|---------------|-------------------------------|-----------------------------|------------------|-----------------|-----------------------------|
| 2345-1      | Amber    | Silicone      | 1.0 (0.025)                   | 2.5 (0.064)                 | 6.5              | 50              | 30 (5.4)                    |
| 2345-2      | Amber    | Silicone      | 2.0 (0.051)                   | 3.5 (0.089)                 | 10.0             | 75              | 50 (8.9)                    |
| 2345-5      | Amber    | Silicone      | 5.0 (0.127)                   | 6.5 (0.165)                 | 17.0             | 75              | 150 (26.8)                  |
| K104        | Amber    | Silicone      | 0.5 (0.013)                   | 1.5 (0.038)                 | 4.0              | 25              | 10 (1.8)                    |
| K250        | Amber    | Silicone      | 1.0 (0.025)                   | 2.5 (0.064)                 | 7.0              | 50              | 30 (5.4)                    |
| K350        | Amber    | Silicone      | 2.0 (0.051)                   | 3.5 (0.089)                 | 10.0             | 75              | 50 (8.9)                    |
| K102        | Amber    | Acrylic       | 1.0 (0.025)                   | 2.5 (0.064)                 | 7.0              | 50              | 30 (5.4)                    |
| K109        | Amber    | Acrylic       | 2.0 (0.051)                   | 3.5 (0.089)                 | 10.0             | 75              | 50 (8.9)                    |
| K290ESD     | Amber    | Silicone      | 1.0 (0.025)                   | 2.5 (0.064)                 | 7.0              | 50              | 30 (5.4)                    |
| K100        | Amber    | Silicone      | 1.0 (0.025)                   | 4.5 (0.114)                 | 7.5              | 50              | 30 (5.4)                    |
| M54         | Yellow   | Rubber        | 1.0 (0.025)                   | 2.5 (0.064)                 | 5.0              | 100             | 25 (4.5)                    |
| M69         | Clear    | Acrylic       | 1.0 (0.025)                   | 4.0 (0.102)                 | 5.0              | 100             | 25 (4.5)                    |
| M97         | Yellow   | Acrylic       | 1.0 (0.025)                   | 2.5 (0.064)                 | 5.0              | 100             | 25 (4.5)                    |
| M765        | White    | Acrylic       | 1.0 (0.025)                   | 2.5 (0.064)                 | 5.0              | 100             | 25 (4.5)                    |
| G551        | White    | Release Liner | 4.5 (0.114)                   | 7.0 (0.178)                 | 3.5              | 5               | 150 (26.8)                  |
| G565        | White    | Silicone      | 4.5 (0.114)                   | 7.0 (0.178)                 | 4.5              | 5               | 160 (28.6)                  |
| G569        | White    | Acrylic       | 4.5 (0.114)                   | 7.0 (0.178)                 | 3.0              | 5               | 150 (26.8)                  |
| HM350       | White    | Silicone      | 2.0 (0.051)                   | 3.5 (0.089)                 | 8.0              | 150             | 25 (4.5)                    |
| 2045-2      | Gray     | Acrylic       | 2.0 (0.051)                   | 3.5 (0.089)                 | 7.5              | 325             | 15 (2.7)                    |
| A662        | Aluminum | Acrylic       | 3.0 (0.076)                   | 5.0 (0.127)                 | —                | 18              | 45 (8.0)                    |
| C665        | Copper   | Acrylic       | 1.5 (0.038)                   | 3.5 (0.089)                 | —                | —               | 90 (16.1)                   |

**Important note to purchaser:** Values shown are typical and are not to be used for specifications. All data is subject to change without notice. Before using, the user should determine the suitability of the product for its intended use, and the user assumes all risk and liability in connection therewith. Specifications are also subject to change without notice.



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