

Polyolefin Shrink Tube

[Product Description]

Polyolefin shrink tube is recommended for applications where high performance and durability is required. Ideal for applications such as wire marking and electrical insulation of light wire harness assemblies. Flexible and flame retardant, heat shrinkable polyolefin tubing meets all the requirements of Military Specification MIL-DTL-23053/5C, Class 1 and Class 3; UL 224 VW-1 Rating.

[Properties]

Media	Flexible polyolefin thin wall over-expanded tubing
Shrink Ratio	3:1
Shelf Life & Storage	24 months from date of manufacture when properly stored in a clean area, free of excessive moisture and direct sunlight. Storage temperatures of 70° to 80°F (21.1° to 26.67°C). Shelf life reduced at high temperatures. Operating and storage humidity limit 50% RH non-condensing.
Performance	Indoor life unlimited
Operating Temperature	Range of -67° to 275°F (-55° to 135°C)
Tensile Strength	Physical: 1500 psi/min. Test method: ASTM D638 Chemical: 1000 psi/min. Test method: MIL-I-23053
Elongation	<100% Test method: ASTM D638
Specific Gravity	1.35 max Test method: ASTM D792
Dielectric Strength	500 volts/mil Test method: ASTM D876
Volume Resistivity	1.0 x 10 ¹⁴ max.(ohm-cm) Test method: ASTM D876
Corrosion	No corrosion Test method: MIL-DTL-23053
Water Absorption	0.5% max. Test method: ASTM D570
Flammability	Pass Test method: UL 224 VW-1
Heat Shock	No cracking Test method: MIL-DTL-23053
Fluid Resistance	73.4°F (23°C), 24 hrs.
Heat Resistance	347°F (175°C), 168 hrs.
Shrink Temperature	194°F (90°C) nominal

The values presented above have been determined by standard testing methods, and are average values not to be used for specification purposes. Our recommendations on the use of the products are based on tests we believe to be reliable, but you should conduct your own tests to determine their suitability for your applications. This is because Kroy cannot accept responsibility or liability, direct or consequential, for loss or damage as a result of our recommendations.

Kroy LLC 2004

KROY®

Product Data Sheet



Product Data Sheet

Cast Vinyl

[Product Description]

Cast Vinyl is recommended for applications where high durability and performance are required. Cast Vinyl is UV, chemical and water resistant giving it resistance to outdoor weathering. The acrylic adhesive shows high tack and good adhesion to nearly all surfaces. It's dimensionally stable and very flexible, which makes cast vinyl ideal for curved or irregular surfaces. UL Recognition and CSA Acceptance.

[Properties]

Film	2.0 mil Cast PVC with smooth, gloss finish
Adhesive	Transparent pressure sensitive permanent acrylic adhesive
Liner	Densified paper
Shelf Life & Storage	24 months from date of manufacture when properly stored in a clean area, free of excessive moisture and direct sunlight. Storage temperatures of 70° to 80°F (21.1° to 26.67°C). Shelf life reduced at high temperatures. Operating and storage humidity limit 50% RH non-condensing.
Performance	Outdoor life up to 7-10 years Indoor life unlimited
Application	All surfaces must be clean and dry at an ambient temperature of over 39.2°F (4°C)
Elongation	>10%
Dimensional Stability	<0.2%
Operating Temperature	Operating temperature range of -50° to 180°F (-45.5° to 82°C)
Resistance	UV light, chemical and water resistance
Adhesion	Substrates include aluminum, stainless steel, chrome, acrylic and automotive paint, ABS plastic

The values presented above have been determined by standard testing methods, and are average values not to be used for specification purposes. Our recommendations on the use of the products are based on tests we believe to be reliable, but you should conduct your own tests to determine their suitability for your applications. This is because Kroy cannot accept responsibility or liability, direct or consequential, for loss or damage as a result of our recommendations.

Kroy LLC 2004



Self-Laminating Wire Wraps

[Product Description]

Self-laminating wire wraps are recommended where high performance is required. Ideal for wire marking and electrical ID, Identify terminated wires or new installs! The laminated tail protects printed information from solvents and moisture. The laminated print assures a professional look for any wire or cable.

[Properties]

Film	4.0 mil calendered PVC top-coated with flexographic white ink
Adhesive	Transparent pressure sensitive permanent acrylic adhesive
Liner	Semi bleached kraft
Shelf Life & Storage	6 months from date of manufacture when properly stored in a clean area, free of excessive moisture and direct sunlight. Storage temperatures of 70° to 80°F (21.1° to 26.67°C). Shelf life reduced at higher temperatures. Operating and storage humidity limit 50% RH non-condensing.
Performance	Outdoor life up to 2 years Indoor life unlimited
Application	All surfaces must be clean and dry at an ambient temperature of over 50°F (10°C)
Elongation	>10%
Dimensional Stability	<0.5%
Operating Temperature	Operating temperature range of -40° to 176°F (-40° to 80°C)
Resistance	Chemical and water resistance
Adhesion	Excellent broad specific adhesion

The values presented above have been determined by standard testing methods, and are average values not to be used for specification purposes. Our recommendations on the use of the products are based on tests we believe to be reliable, but you should conduct your own tests to determine their suitability for your applications. This is because Kroy cannot accept responsibility or liability, direct or consequential, for loss or damage as a result of our recommendations.

On-Demand Industrial Labeling Supply

The test data given below is for reference use only.
It should not be considered as specification.



Permanent Adhesion to Variety of Substrates.

(ASTM D3330 on 1/2" strip.
Peel strength greater than 600 gram)

- Stainless Steel
- Aluminum
- Polycarbonate
- Glass
- Epoxy
- Painted Metal
- ABS
- Acrylic
- Rigid PVC



Temperature Resistance

Continuous operating temperatures range from -40° F to 200° F (-40° C to 93° C). It will withstand a minimum of 200 cycles between -40° F (-40° C) and 200° F (93° C) on the substrate list above.



UV Fade Resistance

UV fade resistance greater than 2000 hours in QUV Chamber (Estimated 3-5 year exterior durability)



Chemical Resistance Test

The supply will still be legible after 24 hour immersion in the following chemicals:

- 150° F Water
- Hydraulic Fluid
- Airplane De-icer (Ethylene Glycol)
- Alcohol Mixture*
- ASTM #3 Oil
- Motor Oil
- Skydrol (Airplane Hydraulic Fluid)
- Sea Water
- Jet Fuel
- Alphaflex 200L

*50% Ethanol, 30% Methanol, 20% Water

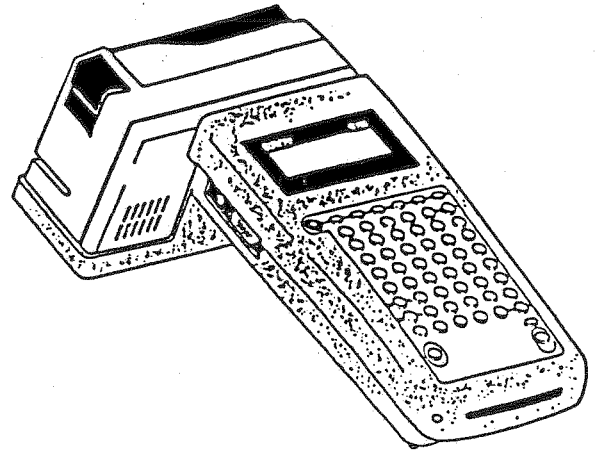
One hour immersion in the following chemicals:

- JP-4 Fuel
- Trichloroethylene
- MEK
- ASTM Reference Fuel B
- Gasoline
- Alphaflex

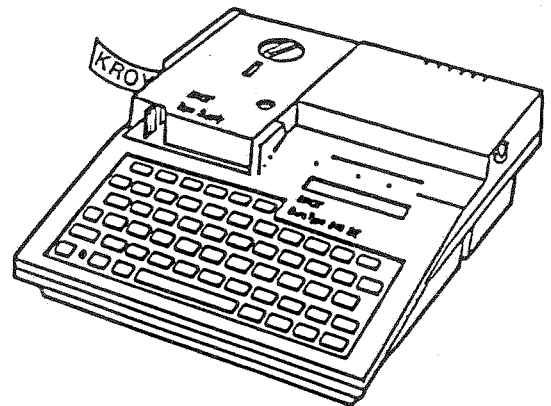
Note:

For best results, adhere labels to clean, dry surface.
If surface requires cleaning, use a solvent to dissolve the residue.

The data indicated above was gathered after test results were received from an outside test laboratory. To the best of our knowledge, the above is accurate and true.



K-Series



240 Series

PRODUCT INFORMATION

Product Description: K2000 Industrial Label Supply tape is contained in a cartridge for printing, laminating and dispensing. The label tape consists of a release liner, pressure sensitive adhesive, polyester receiver film with color coat and topcoat. A wax or resin based ribbon is used to produce the printed image. A polyester laminate film with pressure sensitive adhesive coating is applied to the label tape during the printing process using a K2000 labeler.

Part Numbers: 2487901, 2438701, 2438601, 2487916, 2438716, 2438616, 2438721, 2438621, 2438726, 2438626, 2438731, 2438631, 2438735, 2438635, 2438739, 2438639, 2487943, 2438743, 2438748, 2438648

Product Composition:

- Polyester Laminate Film with Pressure Sensitive Adhesive
- Wax or Resin Based Ribbon
- Topcoated Polyester Receiver Film
- Acrylic Pressure Sensitive Adhesive
- Paper Release Liner

Nominal Characteristics*

Black or White Wax/Resin Based Ribbon¹

Melting Point (°C)	73 - 81
Ink Coating Thickness (µm)	3 - 4
Film Thickness (µm)	4.5 - 5.7

Receiver Film

Topcoating	Polyester or EVA
Substrate	White or Clear Polyester
Film Thickness (mils) ¹	1

Acrylic Pressure Sensitive Adhesive

PSTC-33 Thickness (mils)	0.9
PSTC-1 Adhesion to Steel (oz/in)	42
PSTC-4 Adhesion to Liner (oz/in)	0.2

Release Liner¹

Thickness (mils)	3.1
Density (lbs/ream)	50 (42 alternate)

Laminate Film

Thickness (mils) ¹	1.5
PSTC-33 Adhesive Thickness (mils)	0.65
PSTC-1 Adhesion to Steel (oz/in)	21

* All Values Typical

¹ Data from Manufacturer

The information given herein is based on data believed to be reliable, but Kroy, Inc. makes no warranties expressed or implied as to its accuracy and assumes no liability arising out of its use by others. Before using, the user shall determine the suitability of the product for its intended use, and the user assumes all risk and liability in connection therewith.

Label Tape Features

Nominal Thickness	4.1 mils - Laminated Tape without Liner 7.2 mils - Laminated Tape with Liner
Chemical Resistance:	<u>24 - Hour Immersion</u> The label remains bonded to clean stainless steel when immersed for 24 hours in the following solutions: water at 65°C, sea water, SAE 10W30 motor oil, automotive hydraulic fluid, aircraft hydraulic fluid, aircraft deicer, ethanol or alcohol mixture (50% ethanol, 30% methanol, 20% water). <u>1 - Hour Immersion</u> The label remains bonded to clean stainless steel when immersed for 1 hour in the following solutions: JP-4 fuel, gasoline, methyl ethyl ketone or trichloroethylene.
Environmental Resistance:	<u>Ultraviolet</u> Legible print image, no cracks, distortions or loss of adhesion after 1000 hours of QUV testing in accordance with ASTM G-53 using UVB 313 lamps with a 4 hour 60°C light cycle followed by a 4 hour dark condensation cycle at 50°C cycle. Slight yellowing may occur. Results may vary depending on cycle times, temperatures and type of ultraviolet source used. <u>Exterior Durability</u> 3-5 years depending on location, substrate and environmental conditions. Slight yellowing of the background may occur. <u>Temperature</u> No loss of adhesion after 100 cycles between -40°C and 93°C when bonded to clean stainless steel. <u>Humidity</u> No loss of adhesion when bonded to clean stainless steel after 168 hours at 32°C at 50%RH. <u>Continuous Service Temperature</u> 50°C
Shelf Life:	Twelve months from date of purchase when stored between 15°C and 40°C.
Label Colors:	- Black on Clear - Black on White - Black on Silver - Black on Gold - Black on Red - Black on Blue - Black on Green - Black on Yellow - Black on Orange - White on Red - White on Green - White on Blue - White on Black - White on Clear
Application:	<u>Surface Preparation</u> Substrate surfaces must be clean and dry. Labels require a 24-48 hour dwell time after application to a suitable surface to develop maximum adhesion and chemical resistance properties. If substrate surfaces require cleaning, solvents that dissolve surface residues should be used. <u>Curved Surfaces</u> The suitability of industrial label tape must be determined for curved substrates. <u>Substrate Temperature and Humidity</u> Substrates at low temperature or substrates with high surface moisture may inhibit the label tape adhesive from developing required levels of adhesion and chemical resistance. <u>Substrates</u> Stainless Steel Painted Metal Glass Rigid PVC Epoxy Polycarbonate Acrylic Aluminum ABS

The information given herein is based on data believed to be reliable, but Kroy, Inc. makes no warranties expressed or implied as to its accuracy and assumes no liability arising out of its use by others. Before using, the user shall determine the suitability of the product for its intended use, and the user assumes all risk and liability in connection therewith.