



## PRODUCT BULLETIN

### T1694 - High Performance Flame Retardant Adhesive on Polyester Film

#### DESCRIPTION

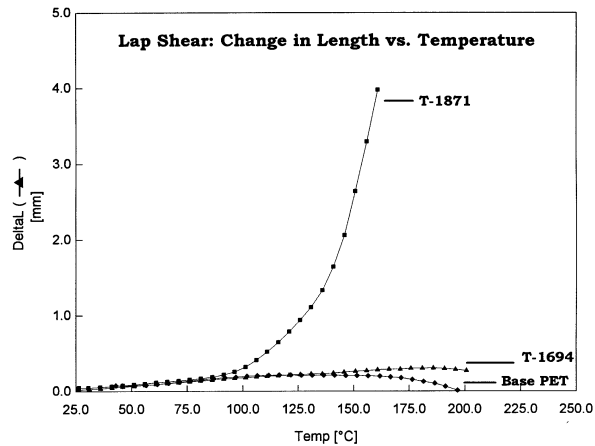
**T1694** is a family of Sheldahl engineered self-extinguishing tapes designed for the manufacture of flexible flat conductor cables. **T1694** is used in applications that require cost effective, high temperature and chemical resistance performance and high shear strength.

#### FEATURES

- **T1694** can be provided with various combinations of adhesive and PET film thicknesses.
- Flat conductor cables are a flexible, light weight, cost effective interconnect alternative. **T1694** cables can be designed to be rolled up or accordion folded.
- U.L. qualified to 94 VTM-0.
- Cables manufactured using **T1694** have 105°C continuous rating.
- The high temperature adhesive system can withstand molten solder applications.
- Shelf Life: Six months when stored at 70°F, 50% R.H. Storage at lower conditions will extend shelf life.
- **T1694** is qualified as a flame retardant coverlay for flexible circuitry.
  - Typical Process Recommendations:

<u>Roll-to-Roll Laminating</u>	<u>Platen Press</u>
• Hot Roll Temp - 350-390°F	• Platen Temp: 275 - 300°F
• Pressure - 200 psi minimum	• 100 - 200 psi
• Line Speed - 10 - 15 fpm	• 10 minutes - cool to 120°F

Sheldahl manufactures a broad range of flexible laminates and insulating materials. Ask for data bulletins describing other Sheldahl products.



## T1694 - HIGH PERFORMANCE FLAME RETARDANT ADHESIVE ON POLYESTER FILM

PROPERTY TO BE TESTED AND TEST METHOD	TYPICAL DATA <sup>A</sup>
Peel Strength, minimum, lb./in. - width IPC-TM-650, Method 2.4.9	10.0
Flammability, minimum percent 0 <sup>2</sup> , IPC-TM-650, Method 2.3.8	30 - 35 <sup>B</sup>
Specific Gravity	1.68
Volatile Content (maximum percent), IPC-TM-650, Method 2.3.37	1.5
Glass Transition Temperature	20°C
Chemical Resistance, IPC-TM-650, Method 2.3.2	70 <sup>o*</sup>
Adhesive Tack Temperature, Clarkston Bar	190 - 200°F
Flow, maximum (Squeeze out in mils), IPC-TM-650, Method 2.3.17.1	2
Dimensional Stability, maximum, percentage, IPC-TM-650, Method 2.2.4	.7
Tensile Strength, minimum lb./in. <sup>2</sup> , ASTM-D-882	24,000
Tensile Modulus (psi), ASTM-D-882	440,000
Elongation, minimum percent, ASTM-D-882	90
Initiation Tear Strength, minimum gms, IPC-TM-650, Method 2.4.16, Method A	800
Dielectric Constant, maximum (at 1MHz), IPC-TM-650, Method 2.5.5.3	3.4 <sup>C</sup>
Dissipation Factor, maximum (at 1 MHz), IPC-TM-650, Method 2.5.5.3	0.02 <sup>C</sup>
Volume Resistivity, minimum megohm-cm, IPC-TM-650, Method 2.5.17	70 <sup>7C</sup>
Surface Resistance, minimum, megohms, IPC-TM-650, Method 2.5.17	10 <sup>3C</sup>
Moisture Absorption, maximum percent, IPC-TM-650, Method 2.6.2	0.4
Dielectric Strength, minimum volts/mil	2 mil = 5000 3 mil = 4800 4 mil = 4200 5 mil = 3900

<sup>A</sup> Sheldahl does not guarantee, nor will it accept obligation or liability based on the use of this data.  
Data

subject to change without notice.

<sup>B</sup> PET film thickness 5.0 mil to 1.0 mil.

<sup>C</sup> Based on 1.5 mil adhesive x 2 mil polyester film.

\* Except chlorinated solvents and ketones.