



APTEK LABORATORIES, INC.

ISO 9001 / AS9100 Certified

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TECHNICAL DATA & INFORMATION

DAT-A-THERM™ 1000
Electrically insulating urethane film

PRODUCT DESCRIPTION

DAT-A-THERM 1000 is a tough, flexible, void free, electrically insulating urethane film designed to fill air gaps and dissipate heat between devices and substrates.

DAT-A-THERM 1000 film is a 100% solids, fully crosslinked (C-staged), thermoset urethane polymer, which will not outgas, while in place and is suitable for high vacuum environments. The film exhibits outstanding reversion resistance and physical stability under long-term aging of high humidity and heat. The ultimate in thermal conductivity and overall performance can be achieved by bonding **DAT-A-THERM 1000** film to device and substrate with DIS-A-PASTE® 2000A/B and 2001 PMF thermally conductive urethane adhesives. Both film and adhesive system are compatible in resin and filler technologies and have been designed to be used together.

KEY FEATURES AND BENEFITS

- Uniform filler distribution for consistent thermal dissipation capability throughout film segment
- Controlled manufacturing process for a void free film
- Low modulus/high elongation for minimum stress buildup under components
- Low Tg - remains flexible to -70°C
- Exceeds NASA outgassing requirements for high vacuum environments
- Typical film thickness, 0.004 to 0.006". Custom thicknesses available.
- Available in sheet or die-cut forms

HANDLING INFORMATION

DAT-A-THERM 1000 film is fully cured and no further processing is necessary. The film is packaged between protective layers and it is suggested that film be removed from packaging only at time of use to keep film surfaces free from contamination. For best results, store **DAT-A-THERM 1000** in original containers at 20-30°C and less than 50% relative humidity. Film may be easily cut with scissors or standard die cutting equipment.

TYPICAL PROPERTIES

(values not to be used for specification purposes)

<u>CHARACTERISTICS</u>	<u>DAT-A-THERM 1000</u>	<u>TEST METHOD</u>
Color	off-white/pale yellow	Visual
Specific gravity	1.96	ASTM D-1475
Standard thickness, mils	4-6	JMTP C-101

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