



POLYSIM 509

SPECIFICATION SHEET

Polysim 509 is an elastomeric polymer blend of a patented inherently dissipative polymer (IDP) with thermoplastic polyurethane (TPU). The product combines the toughness and flexibility of a TPU with an inherently static dissipative polymer network. This network remains intact through injection molding or extruding, while maintaining the physical properties of a TPU. Polysim 509 alloys are formulated for permanent and consistent ESD protection without compromising cleanliness.

TYPICAL PHYSICAL PROPERTIES

HOST POLYMER

FILLER

COLOR

SHORE HARDNESS

SPECIFIC GRAVITY

TEST RESULTS

POLYETHER TPU

IDP ALLOY

TRANSPARENT

90A/47D

1.16

ASTM

(D-2240) (SHORE A)

(D-792)

MECHANICAL PROPERTIES

ULTIMATE TENSILE STRENGTH

3800 (26)

(D- 412) (PSI)

ULTIMATE ELONGATION

450 %

(D-412)

100% MODULUS ELONGATION

1200 (8)

(D-412) (PSI)

300% MODULUS ELONGATION

2200 (15)

(D-412) (PSI)

ELECTRICAL PROPERTIES

SURFACE RESISTIVITY

5×10^9

(D-257) (OHMS/SQUARE)

VOLUME RESISTIVITY

5×10^9

(D-257) (OHMS-CM)

STATIC DECAY TIME BY CHARGE PLATE MONITOR 50% R.H.

0.1 SECONDS

FLAME SPREAD & SMOKE DENSITY

ASTM E84-00A " STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS":

FLAME SPREAD = 10

SMOKE DENSITY = 180

FEATURES

- ◆ PERMANENTLY STATIC DISSIPATIVE
- ◆ DOES NOT REQUIRE HUMIDITY
- ◆ ULTRA-CLEAN: LOW OFF-GASSING, LOW IONICS
- ◆ SEE-THROUGH CLARITY
- ◆ NO PARTICULATES

APPLICATIONS

CLEANROOM SOFTWALLS, WINDOWS AND DOORS.

NOTE: COMPLETE TEST RESULTS FOR OUTGASSING, ANTI-STATIC, AND FLAME SPREAD AVAILABLE UPON REQUEST.

IMPORTANT: WE BELIEVE THESE TESTS TO BE RELIABLE AND ACCURATE TO THE BEST OF OUR KNOWLEDGE, BUT CANNOT WARRANTY FOR PROCESSES AND APPLICATIONS BEYOND OUR CONTROL.

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