

## IMS-T core material Polytherm TC-Lam 1.3

<b>Core material:</b>	Polytherm TC-Lam 1.3
<b>Manufacturer:</b>	MSC Polymer AG
<b>Aluminum thickness:</b>	1500 $\mu\text{m}$
<b>Thickness Dielectric:</b>	100 $\mu\text{m}$
<b>Copper foil thickness:</b>	35 $\mu\text{m}$

Material property	Unit	Specification	Typical value	Test method
Thermal stress at 288 °C	sec	$\geq 20$	120	IPC TM-650 2.4.13.1
Copper peel strength (35 $\mu\text{m}$ Cu)	N/mm	$\geq 1.05$	1.80	288 °C, 10 sec
Dielectric strength	kV	$\geq 5$	$\geq 5$	IPC TM-650 2.5.6.2
Dielectric constant (1 MHz)	---	---	5.5	IPC TM-650 2.5.5.1
Thermal conductivity dielectric	W/mK	$\geq 1.3$	1.3	ASTM-D5470
Thermal resistance dielectric	K/W	---	0.70	intern
Surface resistance	M $\Omega$	$\geq 10^4$	$10^7$	IPC TM-650 2.5.17.1
Volume resistance	M $\Omega\text{cm}$	$\geq 10^4$	$10^7$	IPC TM-650 2.5.17.1
Flammability	Class	V0	V0	UL-94
Creep resistance (CTI)	Plc	0	0	ASTM-D3638
Water absorption	%	$\leq 0.5$	0.03	IPC TM-650 2.6.2.1
Glass transition temp. Tg (DSC)	°C	---	100	IPC TM-650 2.4.24
Maximum operation temp. (MOT)	°C	125	125	UL-796

Source: MSC-POLYMER AG