



IS400

IS400 is a proprietary, temperature resistant resin system with a Tg of 150°C.

It is intended for multilayer Printed Wiring Board (PWB) applications where demanding thermal performance and high reliability are required. IS400 laminate and prepreg products are manufactured using Isola's patented technology, reinforced with electrical grade (E-glass) glass fabric. This system delivers a 330°C decomposition temperature and a low Z-axis expansion.

ORDERING INFORMATION:

Contact your local sales representative or visit www.isola-group.com for further information.

Isola Group
3100 West Ray Road
Suite 301
Chandler, AZ 85226
Phone: 480-893-6527
Fax: 480-893-1409
info@isola-group.com

Isola Asia Pacific (Hong Kong) Ltd.
Unit 3512 - 3522, 35/F
No. 1 Hung To Road, Kwun Tong,
Kowloon, Hong Kong
Phone: 852-2418-1318
Fax: 852-2418-1533
info.hkg@isola-group.com

Isola GmbH
Isola Strasse 2
D-52348 Düren, Germany
Phone: 49-2421-8080
Fax: 49-2421-808164
info-dur@isola-group.com

Performance

Tg 150°C

Td 330°C

Dk 3.90

Df 0.022

zIPC- 4101C /21 /24 /26 /98 /101 /126

UL - File Number E41625

Qualified to UL's MCIL Program

Product Features

- Industry Recognition
 - UL File Number: E41625
 - RoHS Compliant
- Performance Attributes
 - CAF resistant
- Processing Advantages

Product Availability

- Standard Material Offering: Laminate
 - 2 to 93 mil (0.05 to 2.4 mm)
 - Available in full size sheet or panel form
- Copper Foil Type
 - HTE Grade 3
 - RTF (Reverse Treat Foil)
- Copper Weight
 - ½ to 2 oz (18 to 70 µm) available
 - Heavier copper available
 - Thinner copper foil available
- Standard Material Offering: Prepreg
 - Roll or panel form
 - Tooling of prepreg panels
- Glass Fabric Availability
 - E-glass
 - Square weave glass

IS400 Specifications

Property	Typical Value	Units	Test Method
		Metric (English)	IPC-TM-650 (or as noted)
Glass Transition Temperature (Tg) by DSC	150	°C	2.4.25
Decomposition Temperature (Td) by TGA @ 5% weight loss	330	°C	2.4.24.2
Time to Delaminate by TMA (Copper removed)	A. T260 B. T288	>60 >10	Minutes 2.4.24.1
Z-Axis CTE	A. Pre-Tg B. Post-Tg C. 50 to 260°C, (Total Expansion)	50 260 3.3	ppm/°C ppm/°C % 2.4.24
X/Y-Axis CTE	Pre-Tg	13	ppm/°C 2.4.24.1
Thermal Conductivity		0.36	W/mK ASTM E1952
Thermal Stress 10 sec @ 288°C (550.4°F)	A. Unetched B. Etched	Pass	Pass Visual 2.4.13.1
Dk, Permittivity	A. @ 100 MHz B. @ 500 MHz	4.00 3.90	— 2.5.5.3 2.5.5.9
Df, Loss Tangent	A. @ 100 MHz B. @ 500 MHz	0.020 0.022	— 2.5.5.3 2.5.5.9
Volume Resistivity	A. C-96/35/90 B. At elevated temperature	4.0 x 10 ⁸ 7.0 x 10 ⁷	MΩ-cm 2.5.17.1
Surface Resistivity	A. C-96/35/90 B. At elevated temperature	3.0 x 10 ⁶ 5.4 x 10 ⁶	MΩ 2.5.17.1
Dielectric Breakdown		>50	kV 2.5.6
Arc Resistance		120	Seconds 2.5.1
Electric Strength (Laminate & laminated prepreg)		48 (1100)	kV/mm (V/mil) 2.5.6.2
Comparative Tracking Index (CTI)		3 (175-249)	Class (Volts) UL 746A ASTM D3638
Peel Strength	A. Low profile copper foil and very low profile copper foil all copper foil >17 μm [0.669 mil] B. Standard profile copper 1. After thermal stress 2. At 125°C (257°F) 3. After process solutions	1.05 (6.0) 1.45 (9.0) 1.25 (8.0) 1.45 (9.0)	N/mm (lb/inch) 2.4.8 2.4.8.2 2.4.8.3
Flexural Strength	A. Length direction B. Cross direction	82,000 66,600	lb/inch ² 2.4.4
Tensile Strength	A. Length direction B. Cross direction	51,213 41,675	lb/inch ² ASTM D3039
Poisson's Ratio	A. Length direction B. Cross direction	0.183 0.151	— ASTM D3039
Moisture Absorption		0.18	% 2.6.2.1
Flammability (Laminate & laminated prepreg)		V-0	Rating UL 94
Max Operating Temperature		130	°C UL 796

The data, while believed to be accurate and based on analytical methods considered to be reliable, is for information purposes only. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.

isola.keostaging.com/products/printed-circuit-materials/product-template-copy-12/

The Isola name and logo are registered trademarks of Isola Corp. USA in the USA and other countries. IS400 is a registered trademark of Isola USA Corp. in the USA. All other trademarks mentioned herein are property of their respective owners.

© 2016, Isola Group, All rights reserved.



Last Updated Aug 2, 2016