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MTFA500 (DF044) Adhesive Film

MTFA500 (DF044) adhesive resin film is designed to cure between 80 and 120°C, allowing flexibility in component manufacture.

Key Features

Cure temperature 80°C to 120°C

Service temperatures up to 120°C after postcure

Low CTE and shrinkage

Work life at 20°C 28 days

Storage life at -18°C 12 months

Very low VOC content – no added solvents during manufacture.

Performance

Test Parameter	Sample Number						Mean
	1	2	3	4	5	6	
Peel Strength (T) (N/76mm)	321	454	480	416	466	485	437
Peel Strength (L) (N/76mm)	535	554	552	575	551	459	538

MTFA500 (DF044) unsupported							
DMTA - AITM 1-0003 Issue 3							
	Sample	Width	Thickness	Span Length (mm)	Tg-Onset (°C)	Tg-Loss (°C)	Tg-Peak (°C)
DMTA	1	11.95	3.02	17.46	141.32	141.77	149.62

Recommended Cure cycles

Initial cure 80°C at a ramp rate of up to 2°C and maintain for 16 hours under vacuum.

Post cure (where required for high Tg) 1 hour dwell at 120°C – maximum ramp rate of 20°C per hour.

Alternative Cure Cycles and Resulting Tg

Cure (°C)	Initial Min Cure (Hours)	Tg (°C)
80	16	90
90	8	100
100	4	110
120	1	120
Postcure at 120	1	120

Curing Schedule is meant to be a guide only and is subject to local conditions. To avoid exotherm particular care must be taken with thick laminates. Ramp rates must not exceed 1°C per minute when postcuring.

Storage

The material should be kept frozen at -18°C. It must be kept in sealed plastic bags which must not be opened until fully thawed to room temperature.

Health and Safety

Refer to the product Safety Data Sheet before using this material. The following precautions must be taken when using epoxy resin films:

Impervious gloves must be worn
Overalls must be worn

SHD Composite Materials Ltd cannot accept any liability for injury or damage where the above precautions have not been taken or where the material is used for any purpose other than its intended use.

Testing carried out on 300gsm supported adhesive film to ASTM D3165 by Aim Composites.

Issued December 2014

Note: The information and assistance provided herein is for your consideration without legal responsibility. Users are required to perform verification and testing to confirm that the product meets with their requirements.