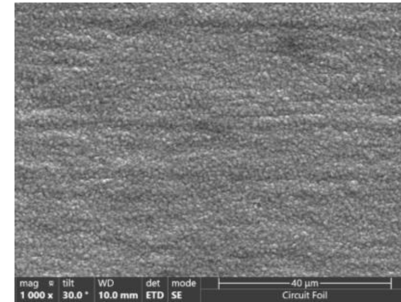
DOUBLETHIN™ NF

ULTRATHIN AND VERY SMOOTH CARRIER SUPPORTED COPPER FOIL DESIGNED FOR MSAP PROCESS (L/S BELOW 10/10 µM).

TYPICAL SUBSTRATES

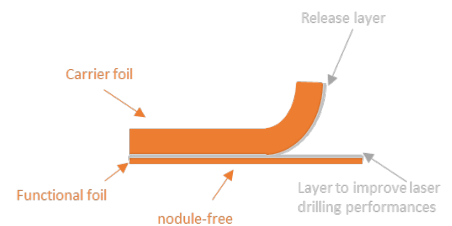
Bismaleimide-Triazine (BT) and halogen-free high Tg epoxy resin systems.
Also convenient for low loss substrates including Polyphenylene Ether/Oxide (PPE / PPO) based resin systems.



Functional Foil Treated Side

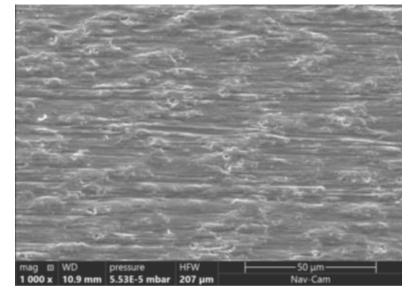
TYPICAL PROCESSES

MSAP process (using copper build-up followed by differential “flash etching” and CO2 laser direct ablation for via holes) used in IC Substrates and HDI/SLP ("Substrate Like PCB").
Also convenient for substractive process.



TYPICAL APPLICATIONS

Mobile communication devices (like smartphones and tablets) and laptops.



Functional Foil Untreated Side

*TYPICAL AVERAGE PROPERTIES**

DOUBLETHIN™ NF						
MEASURED PARAMETERS		**UNITS**	**PRODUCT GAUGE**			
Nominal Thickness		**µm**	**1.5**	**2**	**3**	**5**
Functional Foil Area Weight		g/m²	18 ± 2	20 ± 3	29 ± 3	45 ± 4
Carrier Foil Thickness		µm	12 or 18		18 or 35	
		oz.	3/8 or 1/2		1/2 or 1	
Functional Foil Treated Side Roughness (Rz)	JIS	µm	≤ 0.90			
	ISO		≤ 1.2			
Preferred Lamination Temperature		°C (°F)	≤ 240 °C (464 °F)			
Carrier Release Bond (after 2h @ 220 °C)		-	Easy manual peeling			
Peel Strength of Functional Foil Treated Side on halogen free High Tg FR-4[1]		N/mm (Lb/in)	≥ 0.4 (≥ 2.28)			
Laminate Bond on low loss resin[1]						

[1] after galvanic reinforcement up to 35 µm

ALTERNATIVE For coreless process please consult DOUBLETHIN-CORELESS datasheet.

* ALL OF THIS TECHNICAL INFORMATION HAS BEEN DETERMINED WITH DUE CARE AND THOROUGHNESS. HOWEVER, BECAUSE THE CONDITIONS OF USE AND PROCESS AND APPLICATION TECHNOLOGIES EMPLOYED CAN SUBSTANTIALLY VARY, THE PROVIDED DATA AND FIGURES CAN ONLY SERVE AS NON-BINDING GUIDELINES. THEY DO NOT CONSTITUTE A GUARANTEE THAT THE PURCHASED ITEM WILL POSSESS CERTAIN ATTRIBUTES. FOR THIS REASON, NO LIABILITY WHATSOEVER CAN BE ASSUMED FOR THEM. THE BUYER IS OBLIGED TO CHECK THE SUITABILITY OF ALL SUPPLIED PRODUCTS.