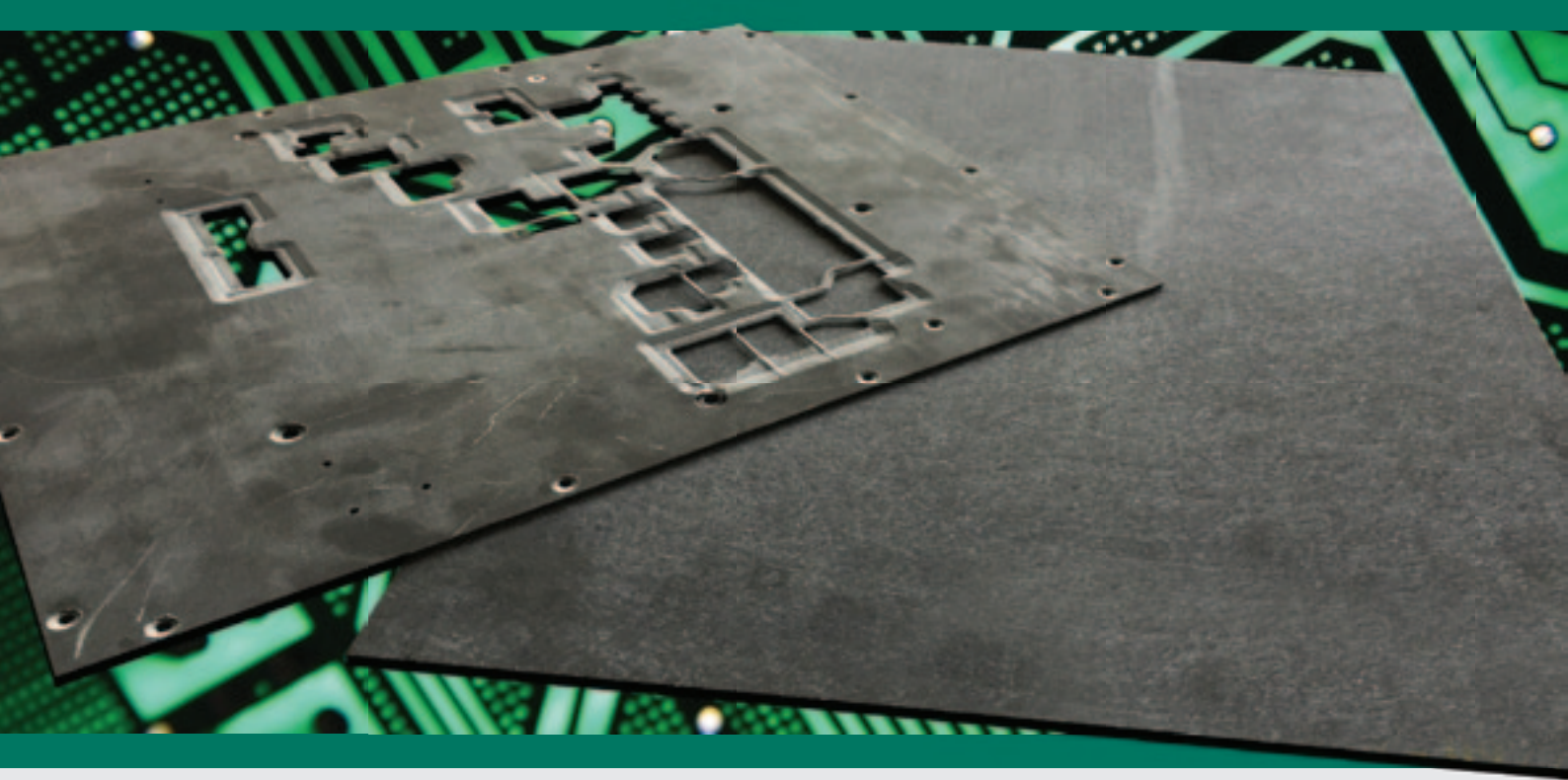


# NATCOM



## **NATCOM - NATURAL COMPOSIT**

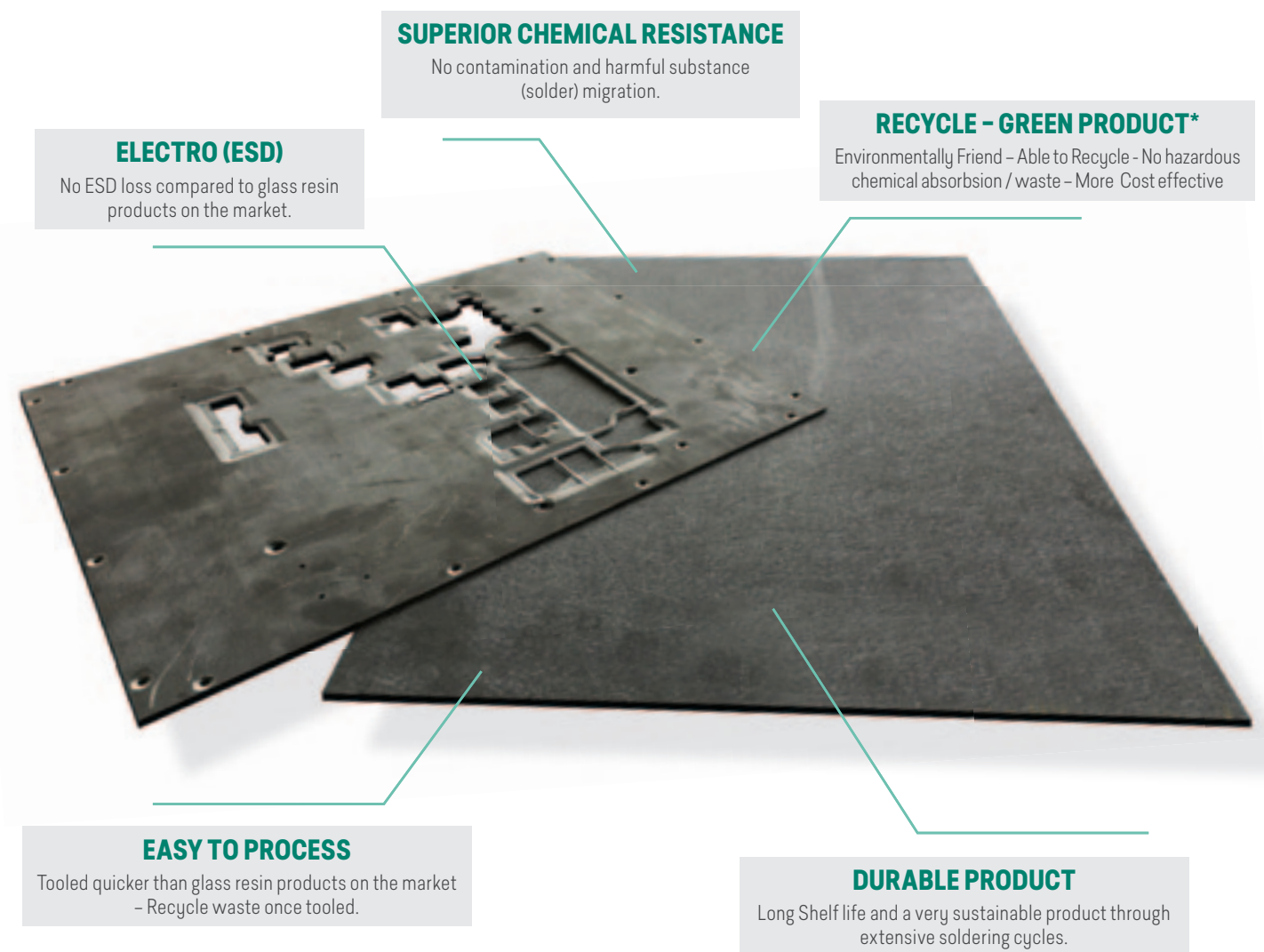
NEW TECHNOLOGY USED FOR SOLDERING  
PALLETES / FRAMES, STENCIL SUBSTRATES, CLAMPING LIDS,  
JIGS AND OTHER APPLICATIONS.



NATCOM is a natural based composite developed for multiple markets for heat protection, however primarily for a new material for soldering pallets to protect Printed Circuit Boards (PCB) production. The innovative technology combines the favourable 'Green' based components to manufacture, excellent electrical characteristics and offers a competitive alternative to the fibreglass strengthened epoxy resin and aluminium currently on the market.

NATCOM meets the high standard required for the soldering procedures. The natural based frame gives high mechanical strength while the floral gives flexibility to the material. It is characterised by dimensional and heat stability, and extreme high resistance to heat. It's favourable thermal dynamic properties make it possible to speed up the soldering process and increase productivity.

## ADVANTAGES



\* After completion of the use of the NATCOM tool, our customer is able to return this product to NATCOM free of charge. Current resin glass products have to be removed as hazardous waste which the customer has to pay a premium for disposal. This removes thousands of tons of hazardous harmful substances being put into land fill, reducing the environmental impact of the electronics industry, and the amount of the environmental product tax currently paid.

## APPLICATION – SMT Assembly, soldering procedures

Extensive testing has proven that NATCOM can be used safely in multiple areas of Surface Mounted Assembly. It protects against ESD and can be processed easily and precisely (small delicate routing requirement), enabling accurate joining, which, due to its dimensional stability is guaranteed throughout the whole lifetime of the product.

It is also resistant to 350 degrees Celcius and retains its excellent mechanical properties, therefore concluding NATCOM is an excellent choice in the case of the majority of mass production common soldering procedures (wave soldering, Reflow, selective soldering):

- protecting covered placed components
- ensures ideal heat conduction for the PCB and proper spread of the solder
- prevents 'X' / 'Y' and 'Z' expansion of the PCB outside IPC standard
- Excellent resistance to chemicals used during soldering.
- NATCOM does not absorb hazardous waste
- Shortens the soldering cycle due to favourable thermal dynamic properties compared to current resin glass products on the market.

PROPERTY	UNIT	THINKEE TST 0706
Grade		Standard - Chemical resist
Surface Resistance	Ohm	1,6x10 <sup>10</sup>
Specific Gravity (Density)	g/cm <sup>3</sup>	1,45
Bending Strength	Mpa	112
Flexural Modulus	Mpa	1,8 x10 <sup>4</sup>
Thermal Expansion	10 <sup>-6</sup> /k	0,8
Max. Operating Temperature	°C	350
Standard Operating Temperature	°C	280
Flatness Tolerance	mm	+/- 0,15
Parallelism	mm	+/- 0,1
Thickness Tolerance	mm	+/- 0,1
Water Absorption	%	With surface protection - 0,06 Wo Surface protection 0,81
Thermal Conductivity	W/mK	0,35
Standard Sheet Format	mm	Current size 310x420
Thickness	mm	From 3 mm up to 12 mm
Melted Pb bath	60 sec	No Change
Other advantages		- CnC time is 60% less compared with resin fiberglass composit - Gentle with the drill bits - Green material - compostable - it is lighter in this case for ladies more easily to lift the product - no liquid is required for cleaning