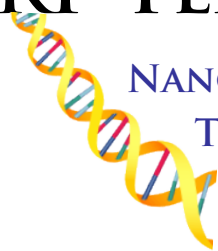


RP TEMPERING™ TECHNOLOGY NEWS



NANO-COMPOSITE
TECHNOLOGY

VOLUME 7

SOLID FREEFORM ADDITIVE TECHNOLOGY
& PATENTED ENGINEERING TECHNIQUE

SEPTEMBER 2006

Global Initiative - RP Tempering™

PAR3 Technology (formerly, Manufacturing by Design, Inc.) commercialized the RP Tempering™ nano composite technology only 10 months ago. However, business initiatives are already in place to offer regional support personnel for RP Tempering™. This will include regional business units managing Licensing, Technical Support and Distribution. We are working to establish regional support across the globe including locations like Europe (Germany), UK, and Israel among other areas!

Until this initiative is in place please contact one of our established

support locations which include:

- **RP Tempering** - Licensing, Technology Center, & Distribution - www.RPTempering.com - Indianapolis, IN and Louisville, KY
- **PAR3 Technology** - Technical Support - www.PAR3Technology.com - Cookeville, TN
- **Alpha Products** - Master Distributor - www.alphapro.com - Malaysia, Australia and Singapore
- **Total CS Team** - Technical Support - www.TotalCSTeam.com - Stevenson Ranch, CA
- **ProtoCall** - Technical Support - www.partsonline.com - Milwaukee, WI
- **My RP Community** - Live forums - www.myrpcommunity.com - Website

Parts Pass Automotive Vertical Burn Test

Multiple parts have been put to the test by applying the Hi-Temp Protoplass™ directly to an existing part. Several under-hood automotive applications have been tested to meet this automotive vertical burn test/FR code. We have passed the automotive FR test with Hi-Temp Protoplass© applied to LS Nylon11 and SL Blue-

stone™ materials. Other SL and LS material that came close to passing the tests include Prototherm™, 12110, Duraform™ PA & GF. Although, we have been trying to work with all the major OEM materials suppliers and most of them want to test parts, it tends to move slow. It is in our plans to do more FR tests (automotive, marine & aerospace) on other materials including SL resins.

Fire Retardant Hi-Temp Protoplass™ Data Sheet

Black Color Hi-Temp Coating

	<u>Powder</u>	<u>Resin</u>	
	SLS Duraform	11120, 14120, 9100	
	GF & PA, 12110, Nylon11	9120, Prototherm	Bluestone
Degrees F Heat Resistance	1000* Degrees F	750* Degrees F	1250* Degrees F
Degrees F Heat Deflection	600* Degrees F	400* Degrees F	700* Degrees F
MVSS302 FR Code	Pass	Fail	Pass
Coefficient of Thermal Expansion ASTM E 831-93: TMA(T_Tg.90-150°C) – 81-91(x 10'm/m C)			

Hi-Temp Protoplass™ Data Sheet

Black Color Hi-Temp Coating

	<u>Powder</u>	<u>Resin</u>	
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The materials that passed all successfully met the following criteria.
 Pass - Automotive vertical burn test & FR Code
 Heat Deflection ASTM D648: 264 PSI – 400* F
 Heat Resistance ASTM D648: 780* F
 Coefficient of Thermal Expansion ASTM E 831-93: TMA(T_Tg.90-150°C) – 81-91(x 10'm/m C)

3 Companies Join RP Tempering™

We are pleased to add two new RP Tempering™ Service Bureaus and one OEM.

We would like to welcome to the RP Tempering™ Technologies family Moller Design located in Seattle, Washington. You can visit Moller Design at www.moellerdesign.com. Moller Design is very well recognized as a key player in the product development and rapid prototyping industry.

We would also like to welcome into the RP Tempering™ Technologies family Accelerated Technologies Industries (ATI) located in Austin, Texas. You can visit ATI at www.atirapid.com. ATI is one of the

earliest companies to be involved in the rapid prototyping industry.

Panduit Corporation is an OEM with internal capabilities. We welcome Panduit to the RP Tempering™ team.

The RP Tempering™ Licensee's Include:

Proccall - Wisconsin - www.Partsonline.com & www.temperedparts.com.

Laser Reproductions - Ohio & Detroit - www.Laserrepro.com

American Precision Prototypes (APP)

- Tulsa & Atlanta - www.approto.com

Southern Prototype - Kentucky - www.southernprototypes.com

Dyancept - New York - www.Dyancept.com

Design Prototyping Technologies (DPT)

- New York - www.dpt-fast.com

PSI Molding - Chicago - www.psi.com

Plasticos Promex - El Paso & Mexico - www.plasticospromex.com

Alpha Products/Alphapro - Singapore, Malaysia & Australia - www.alphapro.com

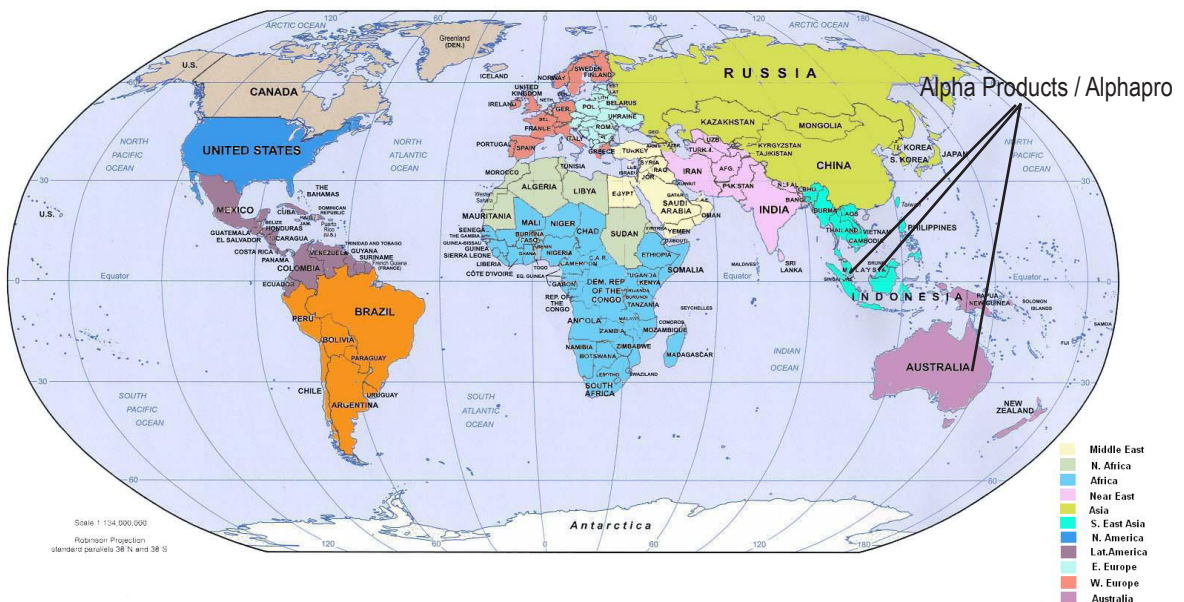
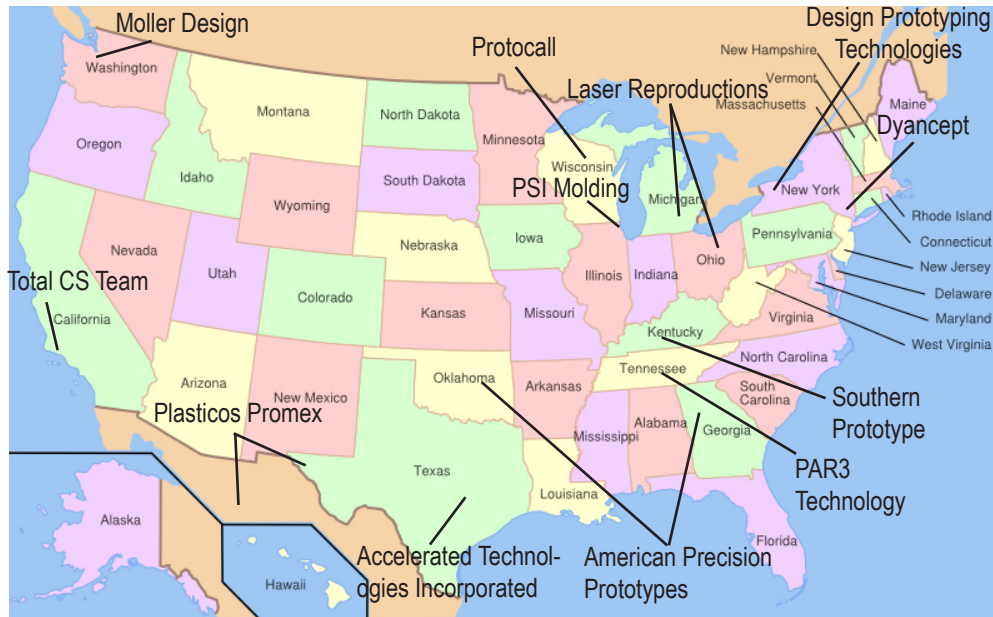
Total CS Team - California - www.Totalcsteam.com

Moller Design - Seattle - www.moellerdesign.com

Accelerated Technologies Incorporated (ATI) - Austin - www.ATIRapid.com

Virginia Academy, N/A

Panduit Corporation, N/A



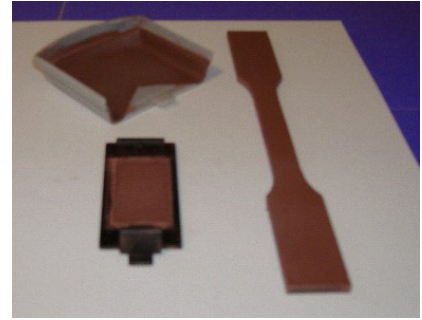
RFI & EMI Shielding Data Sheet

CopperCoat RP

Electrical Copper

Volume Resistivity	ASTM D257	Less than 1ohm, cm
Surface Resistivity	ASTM D257 EDS S11.11	Less than 1E4 ohm, sq
Surface Resistance	EDS S11.11	Less than 1E3 ohm
Staic Decay	FTMS101C 4046.1	
MIL-PRF-81705D, 5kV to 50 V, 12% RH		Less than 2.00 s

Attenuation: more than 75 dB from 1 MHz to 1 GHz. Tested for stability up to 160° F



NickelCoat RP

Electrical Nickel

Volume Resistivity	ASTM D257	Less than 0.7 ohm, cm
Surface Resistivity	ASTM D257 EDS S11.11	Less than 0.7 ohm, sq
Surface Resistance	EDS S11.11	

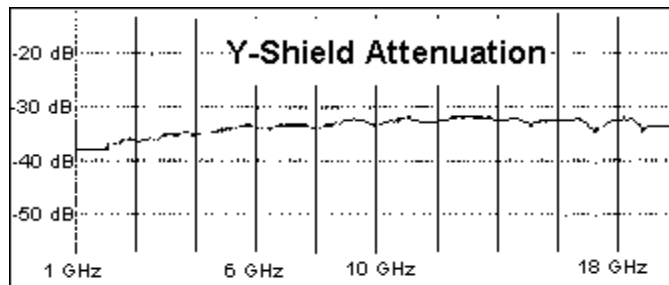
One to two mil coating provides 40dB - 50dB shielding across a frequency range of 5 to 1800MHz.

Tested as per IEEE Std. 299-1997 Underwriters Laboratories Recognized File No.: E202609 RoHS Compliant

Very effective for blocking cell phone signals, CB, TV, AM, FM signals, radio frequency radiation and microwaves. Tested highly effective up to 18 GHz!

Especially good for RF shielding plastic electronics enclosures. Consists of a tough, durable acrylic base pigmented with a high purity nickel flake

Easy to apply water-based paint for walls, ceilings, doors and other interior surfaces. Very effective for blocking cell phone signals, CB, TV, AM, FM signals, radio frequency radiation and microwaves.



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