RP TEMPERING™ TECHNOLOGY NEWS

NANO-COMPOSITE TECHNOLOGY

SOLID FREEFORM ADDITIVE TECHNOLOGY & PATENT PENDING ENGINEERING TECHNIQUE

VOLUME 26

MARCH 2009

ImageTemp© Will Not Interfere with Imaging

RP Tempering™ Technologies development of a coating that will not interfere with MRI, CT or X-ray image results has been successfully completed. We are very excited to introduce ImageTemp© coating that has been primarily developed for use on radiology applications (MRI, CT, X-Ray). This new coating also needed to be radiolucent or "noise free" in order not to interfere with imaging results. The medical/health care industry requires us to consider patient safety regarding blood borne pathogens and/or other contaminants on parts that come into human contact. The health care environment required a clean and sterile environment, as well as one that is therapeutic for patient comfort. ImageTemp© is a monomer based, viscoelatic coating and does not contain irritating chemicals like latex or latex by-products.

SPECIFICATIONS:
Available: aerosol cans, brush-on can
Colors: clear, blue, red, black & yellow
Fast drying and cure time
Solids: (wt) 24%
Tensile: [ASTM D-412] 713psi
Temperature use range: 0°F to 200°F
Weather ability: (ASTM G-53) Excellent 7-10 years
Freeze Thaw Stability: Excellent
Elongation: [ASTM D-412] 364%
Tear Resistance: (ASTM D1004) .082
Block resistant: 4hr @ 140°F
Shelf life: 1+ year @77 f unopened container
Chemical resistance: In House Test Results (ASTM D1308)
Mineral oil: very good
Machine Oil: very good
Saline: very good
Blood: very good
Urea (6% in H2O): very good
All purpose cleaner: very good
Betadiene (Iodine): very good (note stained after 5 minutes)
Acid (10% sulfuric in H2O): very good
Gasoline: good
Alcohol: very good
Ketone: poor
Aromatics: fair
Aliphatics: good

Does Not Cause Artifacts in Imaging Applications

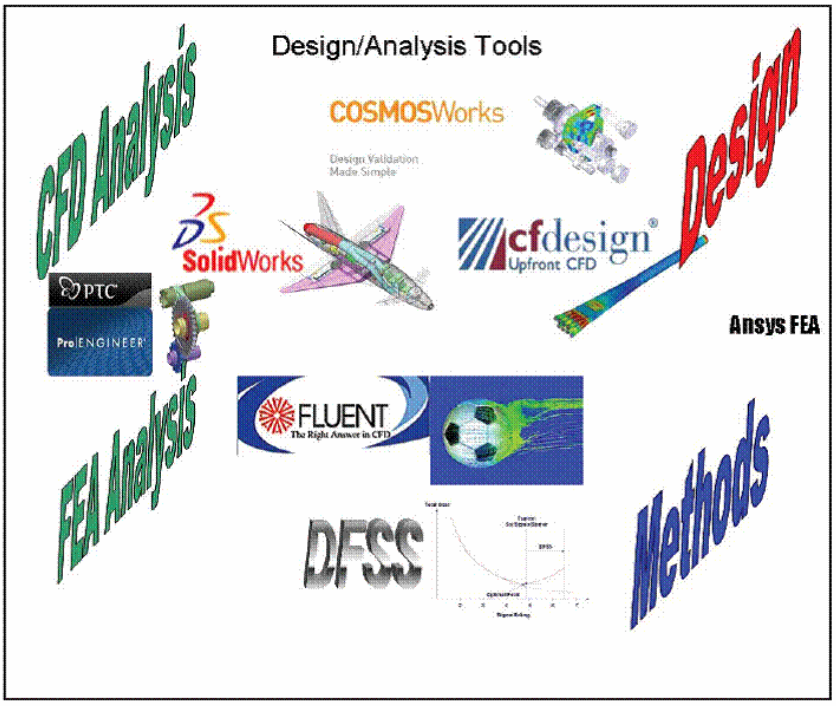
ImageTemp© coating can be applied to enhance and/or protect both internal or external component parts made from multiple materials. Materials include: SFF/RP materials, thermal plastics, rubbers, metals/steels/aluminum/alloys, fasteners (nuts, bolts, washers), glass, electrical wiring, electrical components, magnets, composites, fiberglass, cloth/fabrics, circuit boards and more. Examples of product parts for coating enhancements:

- Foam part enhancements (positioning, gaskets, cushions, etc.):
  - o improve durability
  - o improved puncture resistance
  - o durable surface for repeated cleaning & reusability
  - o fire resistance
  - o sealing surface improving environmental & chemical resistance
- Plastic, RP, Rubbers, Fiberglass and Composite part enhancements (covers, internal geometry, structure, etc.):
  - o improve durability
  - o increase thermal insulation
  - o improve electrical insulation
  - o fire resistance
  - o surface protection against abrasion
  - o easier cleaning
  - o vibration dampening
  - o noise reduction.
- Metal & Steel fasteners to enhance:
  - o prevent rusting
  - o prevent loosing of bolts & clips
- Sheet Metal, Aluminum and other Alloy part enhancements:
  - o surface protections
  - o prevent rusting
  - o noise reduction
  - o vibration dampening
  - o increase thermal insulation
  - o improve electrical insulation
- Plastic Sheet enhancements:
  - o surface protection
  - o improve durability
  - o increase impact strength
  - o vibration dampening
  - o noise reduction.
- Electrical Wiring, Circuit Boards and other Electrical Component enhancements:
  - o electrical insulation
  - o improve durability
  - o chemical resistance
- Magnet enhancements:
  - o increase impact strength
  - o improve durability
- Cloth, Fabric and Vinyl Cover enhancements:
  - o improve durability
  - o improve puncture resistance
  - o chemical resistance
  - o sealing
  - o shielding UV light
  - o fluid resistance

In This Issue

3DSUG

The 3DS Users Group meeting will be held March 15-16. Visit the RP Tempering Area at this years 3DSUG Conference at the Total C S Team Booth. Put your business card in a drawing for a Free Mechanical Property Kit! Marty McGough and Andrew Graves will be available for questions or comments during the conference.



Dimension World Expo 2009

RP Tempering™ Technologies and our business associates Total CS Team, TCST, attended this years Dimension Conference in California. The turn out for Dimension and RP Tempering™ was overwhelming. Marty McGough and Andrew Graves of TCST are recognized experts in the Rapid Prototyping and SFF industries. The RP Tempering™ booth consistently had two or more individuals interested in RP Tempering™ Technologies according to Marty. The tempering technologies has had great success with FDM applications to include:

- mechanical property enhancements like living hinges (200 to 500 cycles plus)
- sealing porosity (water tight & 200 plus PSI)
- EMI & RFI shielding
- lubricated surface production applications (food & industrial grade)
- electrical insulation 1400volts per/mil)

The companies that were interested were from several different industries; for example:

- FDM Service Bureaus
- Academia
- Design & Engineering Companies
- Packaging Companies (Consumer Products & Flexible Packaging)
- Dimension Distributors (Globally)

For more information about RP Tempering™ Technologies visit their website at www.TotalCSTeam.com or www.RPTempering.com.

Try Our New RP Tempering™ Kits

Living Hinge Kits
Sealing Porosity Kits
High Temp Kits
Mechanical Properties

Food & Industrial Grade LubeTemp© Spray

If your SL, LS, FDM, Digitally Printed or plastic part application requires a lubricated surface try our LubeTemp© spray products. We have both an industrial grade and food safe grade. LubeTemp© will form a thin hard surface about .0005" thick and dries within 15 to 20 minutes. This will help you resist ware and create a smooth slick surface for a long periods of time. If you have an application that requires increased protection because of friction or if there is an increased chance of wear because of motion or items that need to slide without jamming, these are the products to try!

RP TEMPERING™ NANO-COMPOSITE TECHNOLOGY

LubeTemp© Industrial Grade

Creates Hard Lubricated Surfaces

RP TEMPERING™ NANO-COMPOSITE TECHNOLOGY

LubeTemp© Food Grade

Creates Lubricated Surfaces

Materials & Application Matrix

RP Tempering™ Technologies Materials & Applications Enhancement Comparison Matrix

No Improvement - X Better - B
Good - 0 Best - #

APPLICATIONS	RP Technology Materials SL	LS	FDM	Digitally Printed Resin
Mechanical Property Enhancements				
Living Hinges	0	B	#	#
Improve Durability	0	B	#	#
Improve Impact Strength	0	0	B	#
Improve Elongation	X	0	B	B
Screw Boss Durability	0	B	#	#
Snap Feature Durability	0	B	#	#
Surface Finish	0	0	0	0
Vibration Dampening	#	#	#	#
Sound Absorbtion	#	#	#	#
Thin Wall Durability	0	B	#	#
Lubricated Surface Industrial Applications	0	B	B	0
Lubricated Surface Food Grade Applications	0	B	B	0
Enviromental & Chemical Resistance Enhancements				
Vacuum Pressure Sealing	0	B	#	B
Moisture & Waterial Resistance	0	B	#	B
Petrochemical Resistance	0	B	B	B
Harsh Chemical Resistance	0	B	B	B
Salt Spray Resistance	B	0	0	0
Thermal Property Enhnacements				
Heat Resistance	B	B	B	#
Heat Deflection	B	0	0	#
Thermal Insulation	#	#	#	#
Flame Retardant	#	#	#	B
UV Light Resistance	B	0	0	#
Cold Temprature Resistance	B	0	0	B
Electrical Property Enhancements				
Electrical Insulation	B	B	B	B
Create Conduct Surface	#	#	#	#
EMI Shielding	#	#	#	#
RFI Shielding	#	#	#	#
RF Shielding	#	#	#	#
Imaging MRI/CT Acan Invisible	#	#	#	#
Shield radiation Lights Waves	#	#	#	#
RoHS Compliant	#	#	#	#

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