

Pete Steixner
VP Sales / Member
BARON INDUSTRIES
Liquid Sealing Services
www.BaronIndustries.com

“Making a Good Part Better”

Today's Need for Fluid Tight Parts

- Dual operating fluid systems
 - Part, system or product failure due to migration of operating or foreign fluids
- Thinner/lighter parts
 - More susceptible to permeation of gases and fluids

Today's Need for Fluid Tight Parts Cont'd

- Higher operating pressures
 - Intrusion of incompatible or electrically conductive fluid
 - Electrical failure (change in electrical resistance/properties, compromised reliability)

Today's Need for Fluid Tight Parts Cont'd

- Part failure due to fluid pressure causing high internal force

Common Applications

- Electrical/Electronic
 - Coils, stators, wires, housings, sensors, connectors
- Fiber reinforced composites
 - Trays, enclosures

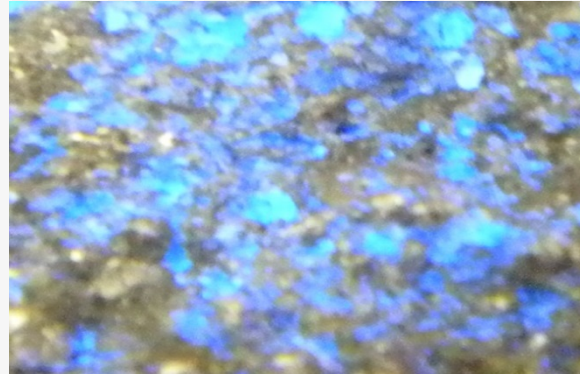
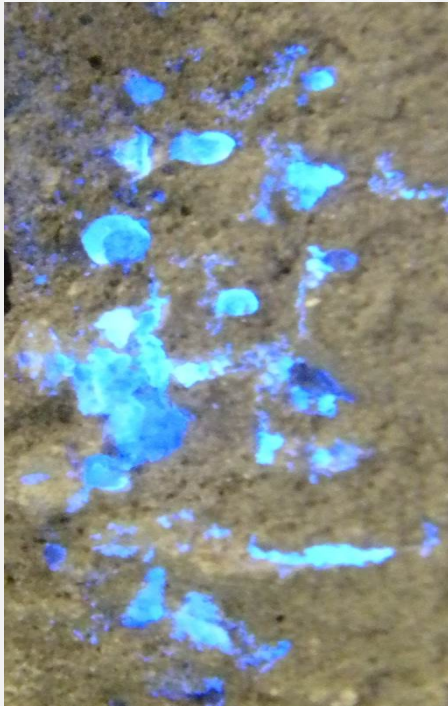
Common Applications

- Ferrous and Nonferrous Castings
- Powder Metal

Liquid Sealing Solutions

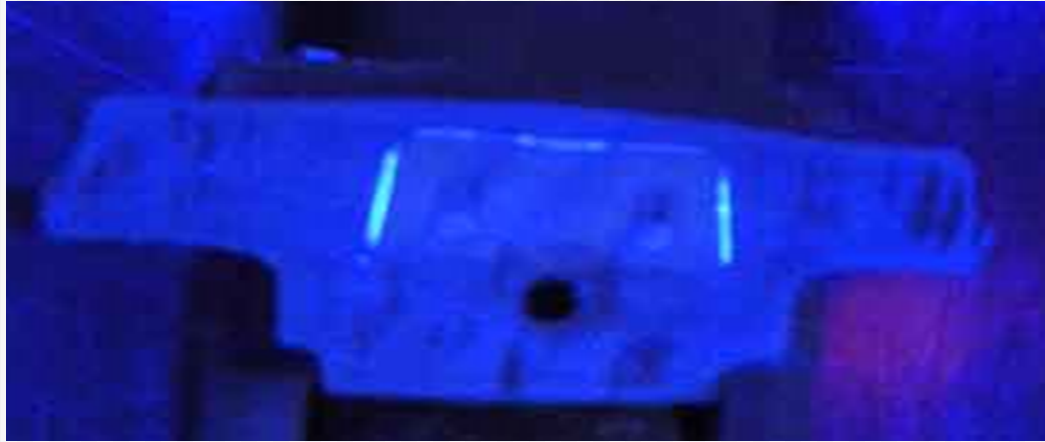
- Low viscosity sealants
 - Leak paths and porosity in substrate
 - Micro interfacial spaces between substrates
 - Between inner and over molds
 - Between conductors and insulators
 - Along fibers in composites

Sealed Leak Paths within a Substrate



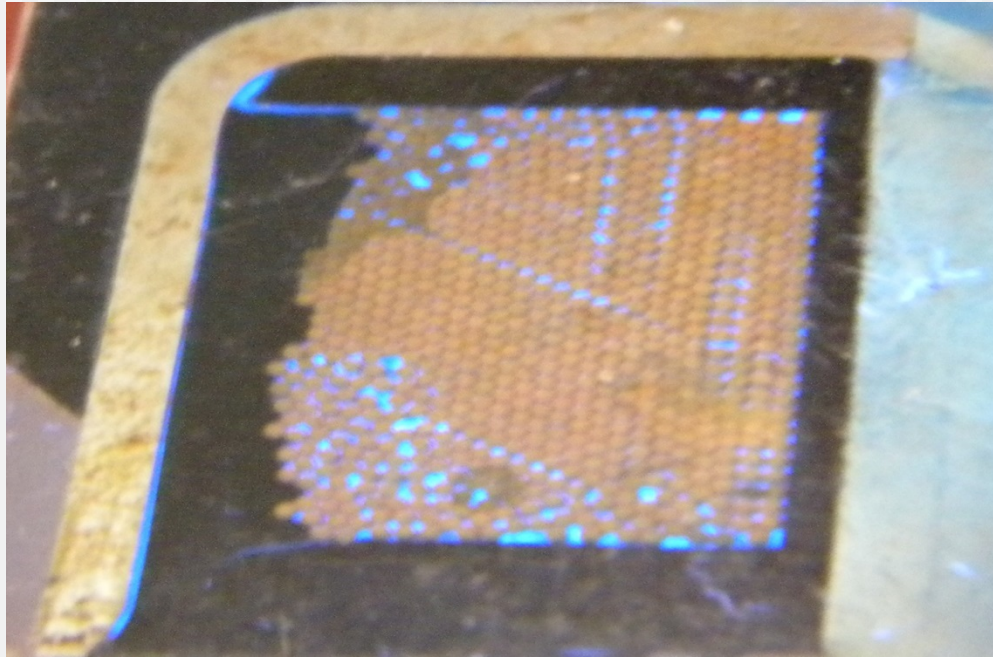
www.BaronIndustries.com

Sealed Micro Interfacial Space Between Two Plastics



www.BaronIndustries.com

Sealed Micro Interfacial Space



www.BaronIndustries.com

Sealant Considerations

- Need for adhesion and/or mechanical strength
- Substrate(s)
 - Type
 - Flexible or rigid

Sealant Considerations (cont'd)

- Testing Requirements
 - Thermal shock/cycling
 - Temperature limits
 - Leak/pressure test method and allowable level
- Gap dimension

Vacuum Impregnation / Sealing Process

- Batch process
 - Basket or fixture
- Process steps
 - Remove air, then saturate part with sealant
 - Remove excess sealant from surface
 - Dry parts and cure/polymerize sealant

Benefits of Liquid Sealing Technology

- No part design change required
- Withstand up to 205C
- Not a coating
- No dimensional change
- Seals all leak paths in entire part

www.BaronIndustries.com

Benefits of Liquid Sealing Technology

- Seals against high pressures (burst strength of part or thousands of PSI)
- Withstands attack from many chemicals and fluids
- Tough, thermoset cross-linked polymer

BARON INDUSTRIES

Liquid Sealing Services

www.BaronIndustries.com

“Making a Good Part Better”