Press Release

RAMPF presents electro casting resins with excellent thermomechanical properties

electronica 2016: High-performance casting systems for the automotive industry / Extremely clear adhesives for optical bonding

Grafenberg, October 24, 2016. New high-performance products: At electronica 2016 in Munich, RAMPF Polymer Solutions is presenting its new portfolio of polyurethane electro casting resins with excellent thermomechanical properties. The company will also be featuring extremely clear adhesives for the optical bonding of displays.

RAMPF Polymer Solutions is represented on the market with a comprehensive range of electro casting resins based on PUR, epoxy, and silicone that combine outstanding thermomechanical and electrical properties with high thermal conductivity. In the automotive, energy, automation, and household goods industries, these casting systems ensure reliability, control, processability, sustainability, and convenience in a wide range of electronic and electrical applications.

RAKU-PUR® electro casting resins with high thermomechanical performance

Thermal shock – shock-like temperature variations linked with the thermal expansion coefficient of materials – can lead to fractures in contacts and cables, cracks in the resin, and cause gaps to open up between the resin and plastic parts in sensitive and complex electronic and electrical components such as electronic control units and sensors.

To increase electrical / electronical components' resistance to thermal shock, RAMPF Polymer Solutions has developed a comprehensive portfolio of high-performance polyurethane electro casting resins whose outstanding thermomechanic properties have been confirmed in dynamic-mechanical analyses (DMAs).

The RAKU-PUR® portfolio of electro casting resins ensures a perfect and lasting resistance to temperature variations in an application temperature range of -40 to +130°C, with benefits including:

> Low modulus of elasticity
> Low Shore hardness
> Low water absorption and good hydrolytic resistance
> Low glass transition temperature

> Low dielectric constant
> Low shrinkage and stress during curing due to low exothermicity
> Good curing at room temperature

Thanks to the use of non-abrasive fillers, the RoHS-compliant, RTI-listed polyurethane systems can be processed on standard two-component mixing and dispensing systems. Systems are also available in a flame retardant version according to UL 94 V0.

1- and 2-component electro casting resins with excellent thermal conductivity

RAMPF also has the perfect long-term solution for keeping components at the ideal temperature for their functionality. Electro casting resins with thermal conductivity of up to 2.2 W/(m*K) ensure that heat is efficiently conducted away from the component, thus reducing thermal loads.

New from RAMPF – extremely clear adhesives for optical bonding

Optical bonding involves bonding two mostly transparent materials using extremely clear adhesives. The perfect coordination of process and material ensures bonding free of air bubbles. Eliminating air gaps between the joints significantly reduces refraction and improves contrast.

RAMPF has developed so called Liquid Optically Clear Adhesives (LOCA) which deliver an unbeatable price-performance ratio and have been optimized for industrial-scale processing on mixing and dispensing systems. These silicone-based adhesives cure at room temperature, are available in various hardnesses and viscosities (from liquid to thixotropic), and boast outstanding optical features:

> 100% transparency / transmission
> Stable color values throughout the entire service life
> Total clarity, very low haze value

RAMPF Polymer Solutions also offers other top-class adhesives for attaching displays, frames, supports, etc. In combination, these are also suitable for use in the “dam and fill” process, whereby a dam is filled with a highly viscous adhesive that keeps the free-flowing optical adhesive in place and, after joining, also helps adhesion.

What’s more, when it comes to optical bonding, the RAMPF Group is one of the market’s leading providers of complete solutions. With its partially patented, fully automated joining method, RAMPF Production Systems ensures the bonding compound is applied reliably. The DC-VAC vacuum dispensing system (left) is designed for processing one- and two-component casting materials, has vacuum material conditioning as standard, and is equipped with a dynamic mixing system.

Visit RAMPF Polymer Solutions at electronica 2016 in Munich from November 8 - 11 – you will find us in Hall A2, Stand 324!

www.rampf-gruppe.de

RAMPF Polymer Solutions GmbH & Co. KG is a leading developer and manufacturer of reactive resin systems based on polyurethane, epoxy, and silicone. The company also possesses comprehensive expertise in application technology.

The product portfolio of RAMPF Polymer Solutions includes liquid and thixotropic sealing systems, electro and engineering casting resins, edge and filter casting resins, and adhesives.

Research and development are highly prioritized: Based in Grafenberg (near Stuttgart), Germany, the technology pioneer and quality leader has laboratories and facilities for application technology within its spacious Innovation Center. Every day in the RAMPF Innovation Center, new products are developed, existing products are adapted to specific customer requirements, and a huge range of material combinations are tested.

The materials created in the laboratory are tested in the application technology department, where samples are also made for customers to further enhance product quality and reduce the time to series production. Naturally, customers also receive support during the product rollout phase and production process.

RAMPF Polymer Solutions attaches particular importance to renewable raw materials during the initial research phase. Bio-polyols are developed in cooperation with sister company RAMPF Eco Solutions. The potential use of recycled polyols in the composition of new products is also closely examined.

RAMPF Polymer Solutions is a company of the international **RAMPF Group** based in Grafenberg, Germany.

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