How far will you go to find a silicone solution to a problem?

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How far will you go to find a silicone solution to a problem or explore a disruptive technology to take your business to a level way above the competition? Polymer Systems' library of silicone materials are looking for a problem to solve. Fresh eyes focusing on an old problem trending now prevalently in the emerging disruptive science of battery technology. IOT's just keeping reaching out to us, as all the computer world connects every device, silicones solve the problem of protecting from water, heat and require extensive testing of chemical, physical and bio compatibility, allowing intimate connection with all life forms. Harvesting energy, storing energy, creating zero emission is the ultimate goal, this places a high emphasis on silicones to function as a di-electric, thermal interface and conduct an electrical current. Extreme conditions encourage the use of silicone, such as a high vacuum, low and high temperatures between -115C to +450 C intermittently. Imagine materials that can function under constant vacuum with super low weight loss, imagine the purity where the total mass loss is less than 0.1%. These wonderful properties can be enhanced with adaptive platinum addition chemistry, in the form of a gel, fluid, grease, single or double sided pressure sensitive tapes, elastomers for moulding and extrusion, adhesives, coatings and foams. Silicones can be bewildering and choosing the right material is often under estimated, hence companies like Polymer Systems nurtures the talent that will create! It is not unusual to rule out a material based on its rheology, yet if processed in a specific way can be adapted for an application. Silicones can insulate, but they can conduct heat or electricity, it's hard to appreciate that silicones can characteristically offer hydrophilic and hydrophobic properties. The specific modification of the polymeric structure of silicone transforms the contact angle of a super hydrophilic silicone near to 90 degrees yet astoundingly a super hydrophobic surface break through the 147 degrees. Silicones can be a fluid , flexible soft rubber and be chemically engineered to cross link to a hard resin on the shore D scale. Silicones can be optically clear, modifying the refractive index from 1.39 to 1.57, transmitting light highly efficiently with very little absorbance as seen in LED's. Yet silicones can block light or absorb certain wavelengths of light. Adapting silicone to be tacky and sticky to adhere to skin and at the same time modify a surface to have a low coefficient of friction so it releases and glides feeling lubricious. There are no boundaries to the problems from all corners of the earth, whether it be oil and gas, healthcare medical, power, cosmetic, aerospace, space, automotive, sensor, light, moulding, extrusion, imaging, paints and inks, solar, drug delivery, rfi shielding, construction, art and orthopaedic prosthetics. No two ideas are the same and the majority of the applications that pass via PST are one off and totally unique.
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