JEDA Polymers Introduces NEW "GX3" Series Line of Engineering Compounds

"GX3" series technology is a family of engineering resins containing Graphene nanomaterial.

Dyersville, IA (January 14, 2025)– JEDA Polymers LLC, an independent compounder of specialty grade engineering thermoplastics and precolored resins has launched a new family of "GX3" series of compounded products. Graphene is an extremely effective material for reinforcing and generally improving plastics because of its mechanical properties. These attractive properties of graphene include:

Strength-to-Weight Ratio

Graphene has an extremely high Young modulus, which is a mechanical property that measures the stiffness of a solid material. In fact, graphene is the strongest material ever tested with a Young modulus of 1 teraPascal (TPa) compared to structural steel that has a Young modulus of 0.2—making graphene five times stronger than structural steel.

Surface Area

Graphene in its monolayer form has a theoretical surface area of 2,630 square meters per gram (m2/g). Carbon black in comparison, which has been a filler material in plastics for for generations, has a theoretical surface area of only 900 m2/g.

Thermal Conductivity

Graphene's thermal conductivity is among the highest of any known material. What this means in terms of plastics is that it should enable these materials to better cope with high temperatures.

JEDA Polymers, LLC
Engineered Thermoplastics

Benefits of Graphene:

- *Strength to Weight Ratio*
- *Surface Area*
- *Thermal Conductivity*
- *Electrical Conductivity*
- *Impermeability*
- *Abrasion/Wear Resistance*
- *UV Absorbing*

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Electrical Conductivity

Graphene is one of the most electrically conductive materials in the world. If you can transfer that property into a composite, it could mean composite materials could be used for electronic applications that were out of the realm of the possibility for polymers using traditional filler materials.

Impermeability

As the thinnest material, graphene is composed of carbon atoms linked to one another in a 2D honeycomb lattice with high electron-density in the aromatic rings, which blocks-off all molecules. This translates to a material that is impermeable against water, oxygen, and ions diffusion.

UV Absorbing

Graphene absorbs all UV light. This can helpful in applications that are exposed to sun light.

Abrasion/Wear Resistance

Graphene lowers the dynamic coefficient of friction (DCOF) and also increases the surface hardness of plastics resulting in greater abrasion and wear resistance plus adding scratch resistance as well.

Explore The Possibilities Of Graphene Enhanced Plastics

Jeda Polymers has pioneered proprietary compounding processes for the addition of Graphene. By incorporating Graphene into plastics such as ABS, LLDPE, Polyamides. Acetal, PC, and PP, JEDA can enhance their functionality and durability while minimizing their environmental impact.

For more information on "GX3" series products call 563-217-4288 or email graphene@jedapolymers.com

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