

Solvay Specialty Polymers Expands Amodel® PPA Portfolio to Meet Growing Demand for Automotive Electrification Solutions



Advanced new grades in Amodel® AE-8900 series meet performance criteria for emerging automotive electronics applications

Solvay Specialty Polymers, a leading global supplier of high-performance thermoplastics, has expanded its Amodel® AE-8900 series of products for automotive electronics applications by adding five new glass fiber-reinforced grades with glass filler ranging from 30 to 60 percent. The new Amodel® polyphthalamide (PPA) materials provide high voltage resistance and retention of dielectric properties at elevated temperatures. They also extend the performance envelope beyond the Amodel® AE-1100 and AE-4100 series by delivering greater resistance to automotive fluids, enhanced thermal properties, higher mechanical strength and lower moisture absorption.

“Automotive design engineers are intensely focused on greater electrification of the drivetrain in order to meet upcoming carbon dioxide emissions standards in Europe and emerging Corporate Average Fuel Economy (CAFE) standards in the United States and China,” said Brian Baleno, global automotive business development manager for Solvay Specialty Polymers. “Our new Amodel® AE grades exemplify Solvay’s industry leadership by expanding the range of advanced materials that meet or exceed critical design criteria for these emerging electronic drive systems.”

Solvay’s new Amodel® AE-8900 series includes AE-8930, AE-8935, AE-8940, AE-8950 and AE-8960 grades, which have 30, 35, 40, 50 and 60 percent glass fiber reinforcement respectively. They offer the best performance among commercially available PPAs with comparative tracking index (CTI) values in excess of 600 volts, indicating excellent resistance to electrical breakdown of the insulating material. This attribute eliminates the possible shorting out or cross-talk between sensitive electrical contacts.

Notably, Amodel® AE-8935 provides the best crack resistance during thermal shock testing of any commercial PPA product. This grade, along with Amodel® AE-8940 PPA, meets key design criteria for emerging automotive technologies, such as electric motors, fuel cell vehicles and power electronics. Specifically, they deliver a high CTI, strong moisture resistance and reliable performance at temperatures ranging from -40° to 150° C (-40° to 302° F).