

DuPont™ Rynite® PET

thermoplastic polyester resins

Application Profile

E/E: Automotive A-01/354

Ignition Coils Put Out 65,000 Volts... and Survive!



Dragsters explode out of the starting blocks and rocket up to 300 mph or more with the aid of high-performance ignition coils made with DuPont™ Rynite® PET



If you thought thermoplastics were only qualified for low- to medium-voltage electrical parts, think again about Rynite® PET. After rigorous open-circuit bench testing of ignition coils at up to 65,000 volts and extensive field trials on racing cars, MSD Ignition is developing coils with bobbins and housings molded from Rynite® PET.

The first is the MSD® Pro Mag coil engineered for maximum output in competitive drag racing, tractor pulls and boat racing. This coil is wired to produce output of up to 50,000 volts. Prototypes of other coils engineered for use in stock car racers or highly modified street cars are undergoing field trials. Additional coil designs are under consideration.

MSD® is registered trademark used by Autotronic Controls Corporation.

The DuPont Oval Logo, DuPont™, The miracles of science™, and Zytel® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company. Copyright © 2001, E.I. du Pont de Nemours and Company. All rights reserved.

H-89821 (08/01)

Manufacturer

MSD Ignition, part of Autotronic Controls Corporation
El Paso, Texas, USA
Phone: 915-857-5200
Fax: 915-857-3344
www.msdition.com

Benefits Gained

Hot dielectric performance. Molded from Rynite® FR946, the coil bobbins have proven in Autotronic's tests to provide effective insulation up to 65,000 V.

Material Selected, and Why

The coil bobbins are molded from Rynite® FR946, a flame-retarded, 46% glass-reinforced modified PET. In addition to providing high-temperature dielectric performance, it has an excellent balance of stiffness, strength, and toughness. At 150°C, a 1.59 mm thick sample disk molded from this resin maintains almost 90% of its room-temperature dielectric strength in the standard 500 V/s short-time test (ASTM D149).

The housings are molded from Rynite® FR530, which also provides an excellent balance of mechanical and electrical properties.

For More Information...

plastics.dupont.com



The miracles of science™