

## **COPOLYESTER (PET)**

**Physical and mechanical properties:** PET shows excellent mechanical properties.

**Chemical properties:** PET offers good chemical resistance to oils, greases, most organic solvents, organic solutions, mineral salt solutions and aliphatic and aromatic hydrocarbons. However, resistance to steam, caustic detergents and acids and bases remains limited. Polyesters offer only fair resistance to bad weather (UV radiation) and must necessarily be protected. PET is used for making objects in contact with food.

**Electrical properties:** Polyesters have good electrical properties that stay constant over a wide range of temperatures. Polyesters find numerous applications in electricity, power production and transmission, and home appliances. Polyesters show little dissipation with high frequencies which prohibits HF welding, but allows them to be used for making containers for microwave ovens.

**Thermal properties:** Polyesters have a high melting temperature which provides good thermal stability in the absence of stress. Polyesters are rated in accordance with fire-resistance standards UL94 from V-0 to HB.

**Printing and marking properties:** The good chemical stability, as for gluing, prevents easy decoration of polyesters. Today, primer coatings or even special inks permit silk-screening, tinting, printing and even metallization or hot-stamp marking.

*Summary by GAGGIONE SAS*

*Information taken from MATIERE PLASTIQUE NATHAN - SEPTEMBER 2007*