



MILES-PLATTS

Materials

Miles Platts have the knowledge and capability to design and process in an extensive variety of engineering thermoplastic and thermoset materials, giving design engineers flexibility to select the most appropriate grade to achieve a cost effective solution.

Miles Platts work closely with leading polymer manufacturers such as DuPont, Solvay, B.A.S.F., DSM, Ticona, EMS and Chevron Phillips, continually testing new and advanced materials ensuring that customers benefit from leading edge moulding technology.

Common materials are as follows:

Nylon 66: 30% Glass Reinforced & Unreinforced

Used in the majority of coil bobbin applications world-wide due to its good electrical and flammability properties and ability to mould thin sections whilst retaining a high degree of stiffness. Unreinforced Nylon 66 and Glass Reinforced Nylon 66 have a recommended temperature rating of Class B (130°C). Some grades have UL 1446 insulation systems up to Class F (155°C).

Flame Retardant Nylon 66: 25% Glass Reinforced & Unreinforced



These materials have similar characteristics to Nylon 66. A Halogen-free Flame Retardant system is incorporated to meet a flammability rating of UL94V0 and to meet the 960°C glow wire requirements (IEC 60695).

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Nylon 46 30% Glass Reinforced

Nylon 46 differs from Nylon 66 having higher heat resistance, is tougher, more rigid and has less creep at high temperatures. Available in UL94V0.

Due to its high crystallinity, Stanyl retains a high level of stiffness at temperatures close to its melting point. This property can prove an advantage when soldering at higher temperatures.

Liquid Crystal Polymer – LCP

LCP Benefits from superior high temperature performance and dimensional stability whilst moulding extremely thin sections. LCP has inherent flame retardancy to UL94V0.

Thermoplastic Polyesters – PBT and PET

These materials are increasingly selected for applications where high stiffness, low moisture absorption, dimensional and thermal stability characteristics are required.



Polyphenylene Sulfide – PPS

PPS has a high resistance to deformation, benefiting from extreme stiffness and is very stable at high temperatures. PPS is inherently flame retardant.

Polyetheretherketone (PEEK)

The Polyetheretherketone (PEEK) material is a semi-crystalline polymer, with excellent mechanical and chemical resistance properties that are retained to high temperatures. It provides a combination and range of high performance properties such as:

- High temperature performance with glass transitional temperatures ranging between 289°F - 324 °F and melting temperatures between 694 °F - 729 °F.
- Excellent mechanical strength, stiffness, long-term creep and fatigue properties.
- High abrasion and cut through resistance combined with a low coefficient of friction.
- Withstands a wide range of acids, bases, hydrocarbons and organic solvents.
- Low moisture absorption, resistant to steam, water and sea water, with low permeability.
- Electrical properties which are maintained over a wide frequency and temperature range.
- Inherently flame retardant without the use of additives. Low toxicity of combustion gases.
- Exceptionally low outgassing and extractable.
- Lightweight, fully recyclable, halogen free and RoHS compliant.



UL RECOGNISED
MOULDER- E176491
A1753