Mineral filled polypropylene sheets for thermoforming

PRODUCT APPLICATION NOTES

Pluss Advanced Technologies Pvt. Ltd.
B-205, Tower B – Pioneer Urban Square, Sec 62, Gurugram-122101, Haryana, India
Telephone: +91 - 124 - 4309490/91/92
E-mail: info@pluss.co.in | Web: www.pluss.co.in

MINERAL FILLED POLYPROPYLENE SHEETS FOR THERMOFORMING

Mineral filled PP compounds have long been used for injection moulding. These have been upgraded to compete with conventional engineering plastics by incorporating coupling agents. Maleic Anhydride grafted polypropylene (OPTIM® P-425) is one such product that couples the mineral filler to the PP matrix. Coupling of the filler imparts improved mechanical and thermal properties to the compound. In addition the cost is reduced.

In the production of PP sheets, OPTIM® P series polymers additionally improve thermoformability. OPTIM® P-425 should be pre-compounded along with the filler. Approximately 3-5% of OPTIM® should be used based on the total compound (including filler).

Sheets up to 40" wide have been extruded and thermoformed for decorative door panels.

Note that thermoforming was not possible in the absence of OPTIM® P-425.

Other improvements obtained as a result of OPTIM® incorporation are:

A. Improved Gloss
B. Better dispersion of pigments in case of colored compounds, an improvement in hue – especially in the manufacture of masterbatch for PP filament yarns.
C. Reduction in die plate out due to its solvating effect on other additives normally added to these compositions.
D. Ability to increase filler content in filled PP compounds.
E. Improved corona treatment retention, metallizing, printability and stiffness.

The following products are available with different MAH percentage and melt indices:

OPTIM® P-408
OPTIM® P-425
OPTIM® P-445