



# Mineral filled polypropylene sheets for thermoforming

## PRODUCT APPLICATION NOTES

### 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 upto 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

The information given here is meant as a guide to determining suitability of our products for the stated applications. It is based on trials carried out by our laboratories and data selected from literature and shall in no event be held to constitute or imply any warranty. The products are intended for use in industrial applications. The users should test the materials before use and satisfy themselves with regard to contents and suitability in the desired application. Our formal specifications define the limits of our commitment. Recommendation herein may not be construed as freedom to infringe/operate under any third party patents. In the event of a proven claim, our liability is limited only to replacement of our material and in no case shall we be liable for special, incidental or consequential damages arising out of usage of our material. This datasheet is subject to change without notice.