



Composite/ Nanocomposite Processing

**THERMOPLASTIC COMPOSITES/NANOCOMPOSITES
PROCESSING OPERATIONS EXPERIENCE**

KEY WORDS

COMPOSITE
PROCESSING,
NANOCOMPOSITES,
THERMOPLASTIC
COMPOUNDING

DESCRIPTION

PLAPIQUI has wide experience in thermoplastic composite and nanocomposite processing operation like blending, compounding, extrusion using single and double screw, injection molding, calendaring, and blowing film extrusion. These processing operations were used either for new materials development or for process optimization using different matrices and fillers like short fibers, mineral particles and nanofillers. Remarkable and special experience in blown nanocomposite films with up to 5% of nanofillers is developed as well as laminates of one polymer composites using films and woven-non woven polymers obtained only by calendaring.

APPLICATIONS

Thermoplastic compounding
Nanocomposite processing
Melt blending operations
Twin-screw extrusion
Injection molding
Blown film production
Calendered sheet manufacturing
Filler dispersion optimization
Fiber-reinforced materials
Mineral-filled compounds
Nanofiller integration
Process parameter optimization
Lightweight material development
High-performance composites

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