Beta Nucleation of Polypropylene

Properties, Technology, and Applications

Philip Jacoby
# Contents

8 Geogrids 97

8.1 Examples of Geogrids Produced with and without Beta Nucleation 99

8.2 Processing Issues Associated with the Production of Geogrids 102

8.3 Line Speed and Stretch Temperatures 105

Reference 105

9 Rotomolding 107

References 108

10 Injection Molding 109

10.1 The Use of Beta Nucleation to Improve the Impact Strength of PP Closures 110

10.2 Impact Strength of Filled PP Systems 113

10.2.1 Calcium Carbonate-Filled PP Composites 113

10.2.2 Natural Fiber-Filled PP Composites 114

10.2.3 Talc-Filled PP Composites 117

10.2.4 Glass Fiber-Filled PP 119

10.2.5 Clay Nanocomposites 119

References 121

11 Fiber Applications 123

11.1 Melt-Spun Fibers 123

11.2 Slit-Film Fibers 125

References 128

12 Pipe Applications 129

References 132

13 Welding and Heat-Sealing Applications 133

13.1 Thermal and Vibrational Welding 133

13.2 Use of Beta Nucleation to Produce PP–PP Composites 134

References 135

Index 137

Color Plate Section