



**ESM**

**BOBBIN YARN**

**ECG 37 1/0 1.0Z 610 31 bbn**  
**EC9 136 Z40 610 31 bbn**

Date: 5/1/07  
 Supersedes: 3/02/05

P&QC: Jeff Garrett  
 Marketing: \_\_\_\_\_

| PROPERTIES                          |                      | INDIVIDUAL PACKAGE  | LOT              | PACKAGE INFORMATION                    |                              |
|-------------------------------------|----------------------|---------------------|------------------|--|------------------------------|
| Binder --                           | Type                 | 610                 |                  | PPG Bobbin Type                        | 31                           |
|                                     | % Nominal LOI %      | 0.95%               | 0.95%            | Splices                                | Splice Free                  |
|                                     | % Tolerance LOI %    | +/- 0.30%           | +/- 0.07%        | Transfer Tails                         | Tie-on-Tails Available       |
|                                     |                      |                     |                  | Nominal Weight of Full Package         | 9.3 Lbs/4.2 kg               |
| Yardage --                          | Bare Glass, Nominal  | 3700 Yds/134 Tex    | 3700 Yds/134 Tex | Minimum Package Weight                 | 2.0 Lbs/0.9 kg               |
|                                     | With Binder, Nominal | 3662 Yds/135 Tex    | 3662 Yds/135 Tex | Package Weight Classification Supplied | SFM                          |
|                                     | % Tolerance          | +/- 6.5%            | +/- 1.5%         |  | SFP                          |
|                                     | % COV, Nominal       |                     | 2.20%            |  |                              |
|                                     | % COV, Maximum       |                     | 3.30%            | Minimum Metered Bobbin Length          | 33,100 Yds/30,267 Meters     |
|                                     |                      |                     |                  | Breakdown by Bobbin Size Each Shipment | Contact PPG Customer Service |
| Broken Filaments Per Plane, Maximum |                      | 10.0                |                  |  |                              |
|                                     |                      |                     |                  |  |                              |
| % Moisture Content Maximum          |                      | 0.25%               | 0.20%            |  |                              |
|                                     |                      |                     |                  |  |                              |
| Tensile Strength, Minimum           |                      | 12.0 Lbs/54 Newtons |                  |  |                              |
|                                     |                      |                     |                  |  |                              |
| Twist --                            | Turns per Inch       | +/- 0.20 tpi        |                  |  |                              |
| Tolerance --                        | Turns per Meter      | +/- 8 tpm           |                  |  |                              |

**OTHER: Conforms to ASTM D578 test method for fiber glass yarns. Lot average - N = 28**