

## MEXLUX ECO 15 GPU H NC

|                    |                              |                                |                        |
|--------------------|------------------------------|--------------------------------|------------------------|
| <b>Description</b> | Recycled ABS heat stabilized |                                |                        |
| <b>Color</b>       | All color                    | <b>Additional formulations</b> |                        |
| <b>Norm</b>        | -                            | Fluidity form 1 to 50 gr/10'   | EL - High impact       |
| <b>Sector:</b>     | Automotive, furniture, white | UV - Light stabilized          | IB - Hybrid Mineral+GF |
| <b>Processing</b>  | Injection                    | UL94 - Flame retardant         | H - Heat stabilized    |

**Applications:** Recycled ABS is widely used in the automotive, electronics, aerospace and additive manufacturing sectors, standing out for its combination of high impact resistance, rigidity, thermal resistance and ease of processing.

| Mechanical Properties        | Values    | Unit              | ISO  |
|------------------------------|-----------|-------------------|------|
| Density                      | 1.06      | g/cm <sup>3</sup> | 1183 |
| Filler Content               | -         | %                 | 3451 |
| Melt Flow Index 220° C/10 kg | 25        | g/10min           | 1133 |
| Shrinkage                    | 0.5 - 0.7 | %                 | 294  |

| Mechanical Properties                 | Values | Unit                  | ISO     |
|---------------------------------------|--------|-----------------------|---------|
| Tensile strength at yield             | 42     | MPa                   | 527-1   |
| Flexural Modulus                      | 2650   | MPa                   | 178     |
| IZOD Impact strength, notched (23° C) | -      | lb-ft/in <sup>2</sup> | -       |
| IZOD Impact strength, notched (23° C) | 16,0   | KJ/m <sup>2</sup>     | 180 1eA |

| Thermal Properties | Values | Unit | ISO |
|--------------------|--------|------|-----|
| Vicat B/50         | 96     | ° C  | 306 |

| Flammability           | Values | Unit | ISO  |
|------------------------|--------|------|------|
| Flame rating at 3.2 mm | HB     | -    | UL94 |

| Processing Conditions | Values     |                       |              |
|-----------------------|------------|-----------------------|--------------|
| Drying                | 3h/90° C   | Suggeste max moisture | 0.15 %       |
| Hopper                | 240° C     | Min temperture        | 240 ° C      |
| 1 <sup>st</sup> Zone  | 250° C     | Max temperture        | 275 ° C      |
| 2 <sup>nd</sup> Zone  | 250° C     | Injection rate        | Medium/High  |
| 3 <sup>rd</sup> Zone  | 260° C     | Injection pressure    | 40 ÷ 80 MPa  |
| Nozzle                | 265° C     | Injection time        | 3 ÷ 15 Sec.  |
| Moulds                | 50 - 70° C | Cooling time          | 20 ÷ 60 Sec. |

Melt Temperature: A critical parameter, generally between 200-300° C for PP, with the recommendation to avoid exceeding 220° C for flame-retardant (FR) grades to prevent degradation.

Mold Temperature: Higher mold temperatures can improve part brilliance and appearance. A typical mold temperature for PP GF is around 20 ÷ 50° C.

Injection Speed: Use high injection speeds to ensure good surface finish and prevent weld lines.

Injection Pressure: Pressure should be high enough to fill the part effectively but not excessive, which can cause flashing or burning.

Mold Venting: Essential for preventing burn marks by allowing trapped gases to escape.

Fiber Length Control: The shear forces within the injection molding barrel can significantly reduce fiber length. Processing conditions need to be managed to control this.

After annealing treatment, PP products can eliminate residual internal stresses and improve impact resistance.

To reduce internal stress and deformation, high-speed injection should be chosen, but some PP grades and molds are not applicable.

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