

Ultramid® B3WG6 CR

(Crash Resistant)

PA6 (Polyamide 6)



Fiber™ Design Process: Pedestrian Protection - Lower Bumper Stiffener



*Pedestrian Protection "LBS" Module
Designed using the Fiber(tm) integrative process*

Performance Solutions:

Since October 1, 2005, pedestrians in Europe can walk the often busy city streets with a little more confidence. EuroNCAP (European New Car Assessment Program) has been conducting pedestrian protection studies on new vehicles for just over two years. To meet the requirements of EuroNCAP and other regulatory agencies, the design concept of a vehicles' front end now faces intense scrutiny. Manufacturers, too, have a set of requirements that must be met: optimal space utilization, ease of assembly, sturdiness upon contact with objects, etc.

Enter **Ultramid® BWG6 CR**, a stable glass filled PA6 (nylon 6) engineering resin that provides the right level of performance that minimizes pedestrian impact. The lower bumper stiffener or LBS weighs just over two pounds, is three feet long and is installed behind the front bumper so as to diminish the risk of serious knee injury in the event of a collision with a pedestrian.

Using our Fiber™ design process and Ultramid® B3WG6 CR the performance of the LBS can be modeled accurately. Fiber™ uses an integrative simulation, that combines a classic mold-fill simulation with experimental data obtained from a special high-speed measuring device made by BASF. The accuracy of the Fiber™ integrative simulation minimizes the need for prototype testing and can shorten the design cycle considerably.

Benefits for Parts Manufacturers & Injection Molders include:

- Fiber™ simulation reduces tests
- Shortened design cycle
- Lower repair costs in accident situations

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