

## Large-format commercial vehicle bodywork parts made of polyurethane

The automotive and commercial vehicles industry is continuing to move away from sheet steel in bodywork parts and is instead using high-performance plastics. Alongside the familiar benefits of plastics such as their greater freedom of design and lower weight, their cost-effectiveness in production is also gaining in importance. Manufacturers are currently focusing their efforts on producing larger and larger parts in a single moulding process. The success achieved in this field, coupled with the possibility of integrating additional functions and components in the mould, means they can cut both costs and manufacturing time. Tailor-made polyurethane systems make it possible to produce even large mouldings with complex structures such as undercuts and ribbing in a single shot with no need for post-moulding treatment.

Furthermore the lightweight characteristics of polyurethane compared with some metal alternatives mean that vehicles are increasingly fuel efficient and therefore help reduce their impact on the environment.

### Plastics make their mark in agricultural engineering

A recent example from the commercial vehicles industry involves the two side panels and tailgate of the “Jaguar Green Eye” forage harvester from Claas KGaA mbH in Harsewinkel, Germany. Each of the moulded parts is manufactured in a single shot from the flame-retardant, microcellular polyurethane system Baydur® 110 from Bayer MaterialScience supplied by the BaySystems BÜFA system house.

The excellent flow characteristics and low cavity pressure impose virtually no restrictions on the geometric design of the moulded parts, especially in the edge and interior areas.

The benefits of polyurethanes over conventional materials such as glass fibre reinforced plastics or sheet moulding compounds become particularly apparent when manufacturing large mouldings with complex interior surfaces.

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