

Powder side striping of can bodies for [parting and necking](#)

The parting and necking process puts higher demands on the strength and adhesion of the powder side striping than any other can forming process, such as flanging, beading or seaming. For that reason, powder stripe application, and in particular temperature control, must be performed precisely in accordance with specification, as otherwise a sufficient strength of the powder for the necking process is not assured.

Heating the body

In the curing oven, the powder must be melted until it is in a liquid state from the effect of the oven temperature. The necessary temperature and the reaction duration are specified by the powder manufacturer. It is easy to check if the temperature applied is sufficient: if the surface of the powder stripe is glossy after the body has cooled down, the powder was sufficiently melted. If the powder stripe is matt or dull, the temperature applied was too low. The oven temperature must then be increased or the reaction duration extended.

Cooling the body

After heating up, the body must cool down until the powder reverts to the solid state. The solid state is achieved when the powder drops below a temperature of just under 40°C (crystallisation temperature). If the body fails to reach this temperature before commencing the necking process, the melted powder remains doughy and is insufficiently solid for braking in the parting process and for forming in the necking process. This important temperature threshold can also be easily checked. A can body is removed shortly before entering the necking machine and its seam is held against the cheek. If this feels pleasant and neither warm nor cold, the can body is at around body temperature (about 37°C). It can be necked without problem. If it feels warm or even hot, the body is insufficiently cooled. The powder is not solid – crystalline – but doughy and hence not breakable or neckable. Cooling must be intensified.