

No Compromise with Aesthetics!

**Surfalex®**

for demanding skin quality

These outer skin products are Al-Mg-Si alloys that have been specifically conceived with the most demanding outer skin applications in mind.

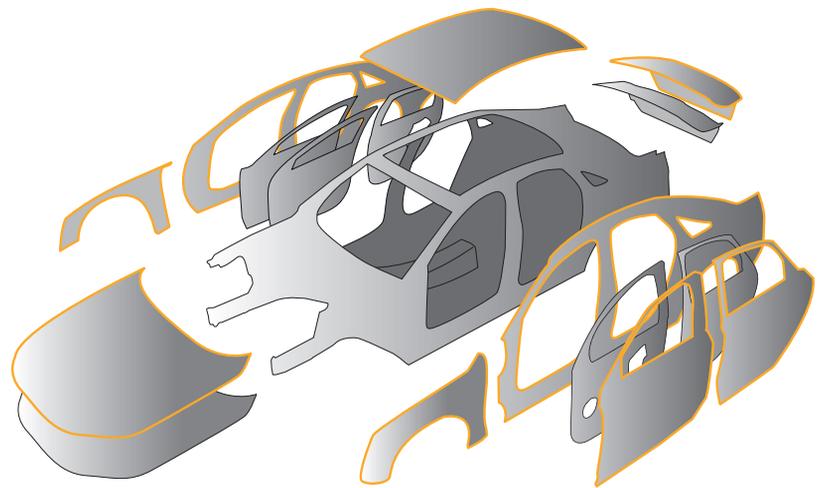
Roping - Hemming - Character lines

**SURFALEX®**

A high-tech alloy, with exceptional surface quality, roping performance and corrosion resistance.

A perfect surface with stringent hemming and balanced properties.

Major OEMs use our Surfalex® in demanding outer skin applications.



↑  
Surfalex®

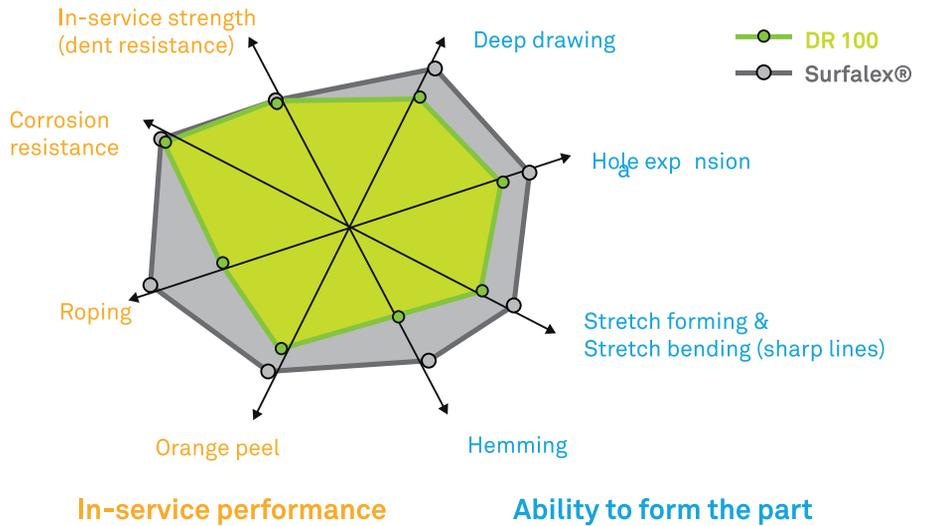


Aluminium Automotive Sheets

# Trends for skin alloy development

Constellium development strategy is towards the overall improvement of the balance of properties, not just improving one property at the expense of another.

Knowing how to operate rolling equipments to avoid surface defects is key for Constellium's Surfalex®.



# Trends towards perfect surface

The trend towards thinner paints implies less tolerance for surface disturbance and/or roping lines after forming. Surfalex® is a 6xxx type alloy specifically developed for the most demanding outer skin applications. Its very good surface appearance after forming is achieved by the tight control of process parameters:

► **Roping** is minimized by optimized thermal mechanical treatment.



Roping-free after 15% strain

► **Flat hemming**

Hemming performance is characterized by:  
 - avoiding cracks during hemming operations;  
 - a good surface aspect that avoids, for example, orange peel.



This can be achieved by optimizing composition, homogenizing, solution heat treatment, and quenching.

### Conversion capabilities

Constellium works with the surface condition, offering EDT of mill finish, and chemical conversion coatings.

Our lubricants include stamping oils, protection oils and hot melt dry lubricants. For more details, please refer to the Global Offering datasheet.

## Surfalex® family: Typical properties

*\*After 2% pre-strain and 20 minutes' simulated paint bake heat treatment at 185°C.*

As supplied (T4)						After PB*	
Rp0.2	UTS	A80%	n	r	VDA bend	Rp0.2	UTS
108	224	26	0,28	0,63	>145°	207	283

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