

NEW RELEASE

SikaForce®-805 L10 FOR LIFTGATE BONDING



Figure 1 Typical Curing-On-Demand process with IR radiation

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EXECUTIVE SUMMARY

Across numerous projects SikaForce® adhesives have proved their excellence and set standards for liftgate bonding applications. Liftgate bonding processes challenge adhesives in a particular way: The need for a long and flexible open time of the adhesive meets the necessity to enable very fast bonding processes and short cycle times. Our new SikaForce®-805 L10 combines both aspects in a unique way and enables efficient and lean bonding processes.

ADVANTAGES AT A GLANCE

- Superior long open time – even at elevated temperatures
- Very fast processes can be achieved with heat acceleration – **Curing-On-Demand (COD)**
- Superior sagging behavior allows high applicable bead thicknesses and a remarkable tolerance compensation
- Very good adhesion on polypropylene grades (filled with long glass fibres or talcum)
- Absence of a plasticizer in the formulation minimizes risk of **Environmental Stress Cracking (ESC)** and bond line read through / marking

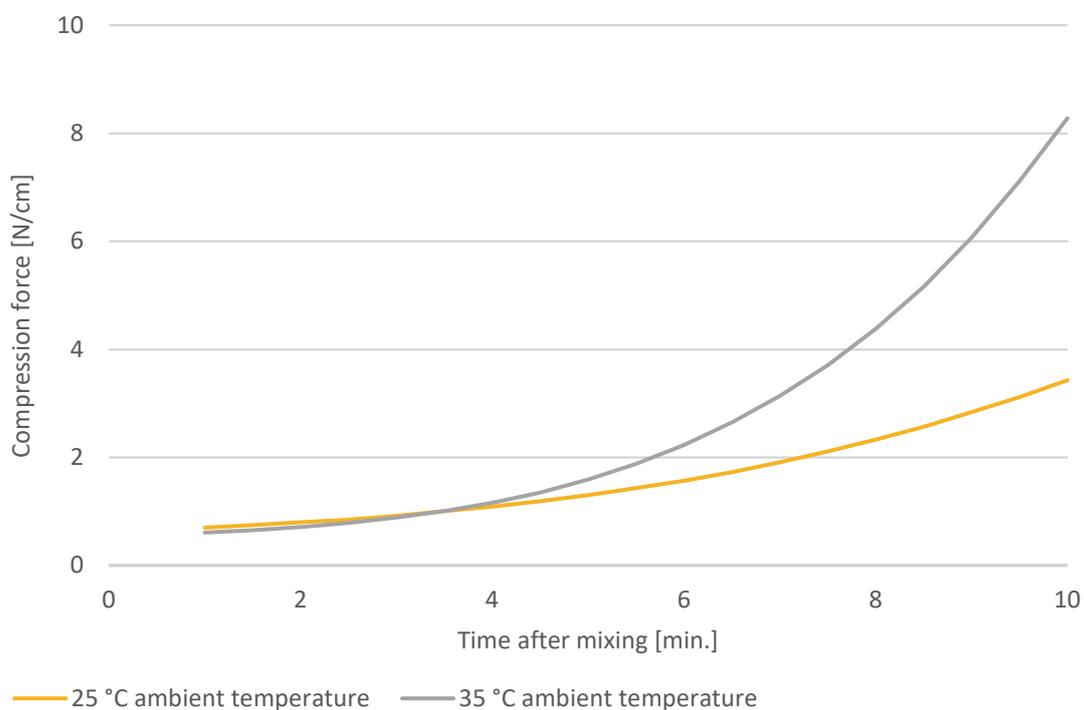
KEY DATA

| PROPERTIES | TYPICAL VALUES |
|-----------------------------------|----------------|
| Mixing ratio (by volume) | 2 : 1 |
| Tensile strength | 3 MPa |
| Elongation at break | 400 % |
| E-Modulus (0,5 – 5 %) | 4 MPa |
| Tensile lap-shear strength | 4 MPa |
| Open time at (23 °C / 50 % r. h.) | 7 min. |
| Open time at (35 °C / 50 % r. h.) | 5 min. |

OPEN TIME

The open time of an adhesive can be practically approximated with the development of the compression forces. A flat curve, especially during a certain period after the mixing process, typically indicates good workability and good wetting behaviour of the adhesive. See the graph below and find the behaviour of the new SikaForce®-805 L10.

COMPRESSION FORCE BUILD-UP



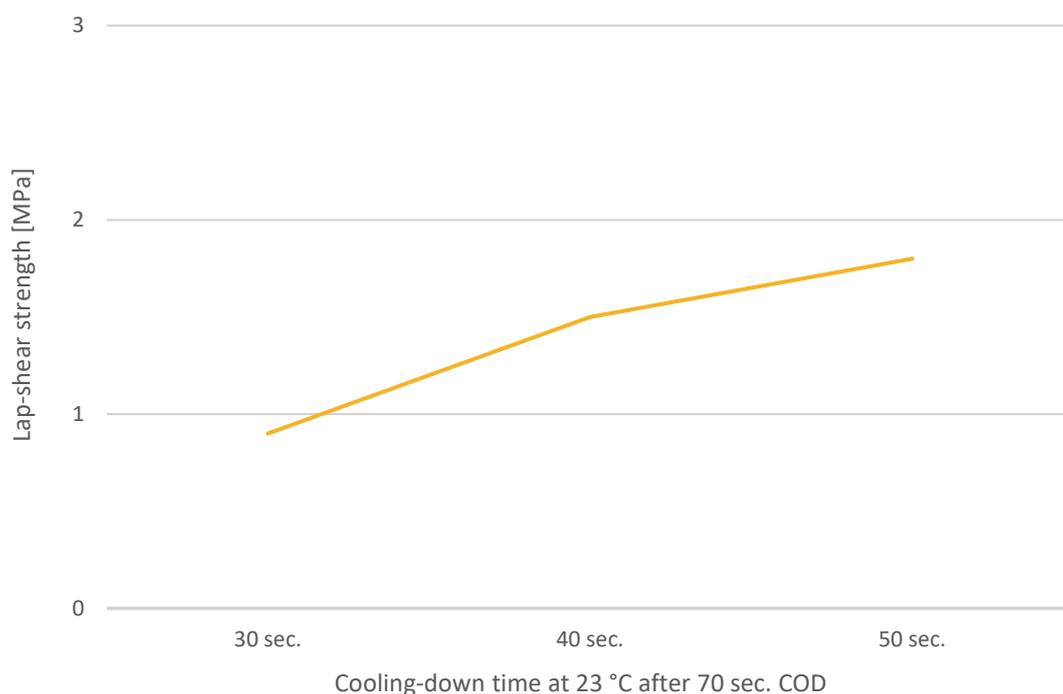
The behaviour of the SikaForce®-805 L10 curves show relatively flat curves at 25 °C ambient conditions up to 7 min. after mixing. Even at 35 °C – a realistic scenario in summer period – the curve remains relatively flat within 5 min. after the mixing process.

When transferring this behaviour to a bonding process, this means a plus of flexibility, especially when large volumes of adhesive need to be applied on large parts like liftgates.

STRENGTH BUILD-UP PERFORMANCE

Liftgate bonding processes are typically driven by short cycle times. A heat acceleration of the adhesive is mandatory in many cases, to achieve a certain level of handling strength of the bonded parts for the downstream processes. In this context, the effectivity of the heat acceleration on the strength build-up of the adhesive is a crucial lever and enabler for efficient bonding processes.

HEAT ACCELERATION



With heat acceleration (COD), strength values ≥ 1 MPa can be achieved within 2 mins. The fastest bonding processes can be ensured with SikaForce®-805 L10. This allows for significant reduction of fixation times and simplification of the bonding cells.

OUTLOOK

We propose SikaForce®-805 L10 for liftgate applications and other component bonding applications, wherever stable and long-term resistant adhesion on PP grades is required. Let's keep in touch and please join us for writing new success stories with a new generation of SikaForce® for liftgate bonding.



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Assembly Line Adhesives

Supporting spoiler, liftgate
and glass bonding solutions

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www.sika-automotive.com

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