

NEW RELEASE

SikaForce®-821 L06 FOR SPOILER BONDING



Figure 1 Bonded Spoiler

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EXECUTIVE SUMMARY

SikaForce® adhesives are leaders in the market and are specialized in spoiler bonding applications. For many substrates like polycarbonate and its blends (e. g. PC ABS, PC PET), that are widely used for automotive and exterior components, a physical activation of the bonding area is needed to ensure a long-term stable bond. Even if in-line activation processes with atmospheric plasma are possible, typically they don't lead to severe bottle necks in time. Sika is proud to introduce the next generation of SikaForce® that allows adhesion without physical activation on given substrates. SikaForce®-821 L06 is our newcomer and specialist for PC bonding.

ADVANTAGES AT A GLANCE

- Very fast processes can be achieved with heat acceleration – **Curing-On-Demand (COD)**
- Superior sagging behavior allows for high applicable bead thicknesses and a remarkable tolerance compensation
- Very good adhesion on polycarbonate and its blends (e. g. PC ABS, PC PET) without pre-treatment
- Absence of plasticizer in the formulation avoids this risk of **Environmental Stress Cracking (ESC)** and bond line read through / marking
- Easy to handle

KEY DATA

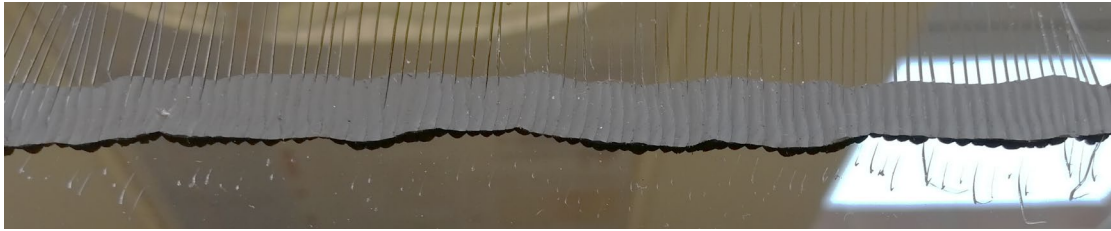
PROPERTIES	TYPICAL VALUES
Mixing ratio (by volume)	2 : 1
Tensile strength	4,8 MPa
Elongation at break	450 %
E-Modulus (0,5 – 5 %)	5,9 MPa
Tensile lap-shear strength	3,2 MPa
Open time at (23 °C / 50 % r. h.)	5 min.
Open time at (35 °C / 50 % r. h.)	3 min.

ADHESION RANGE

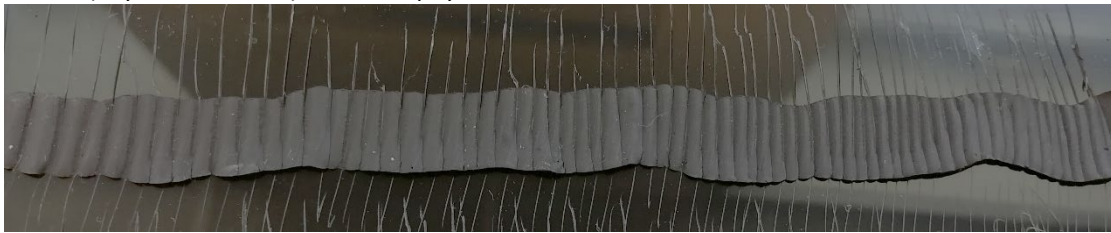
Bead peel testing is a proven and meaningful instrument to assess the adhesion behavior and consequently, qualifying an adhesive for a specific project and application.

RESULTS BEAD PEEL TESTS

PC (Makrolon® AX2675) – without physical activation



PC ABS (Bayblend® T85 XF) – without physical activation



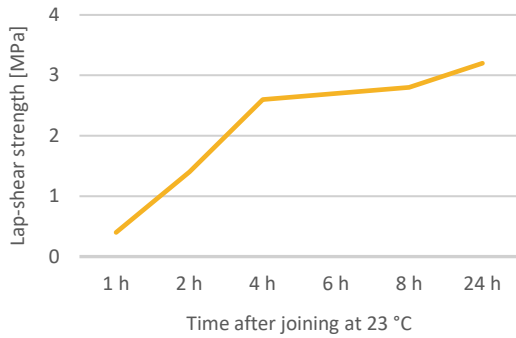
PC PET (Makroblend® UT235 M) – without physical activation



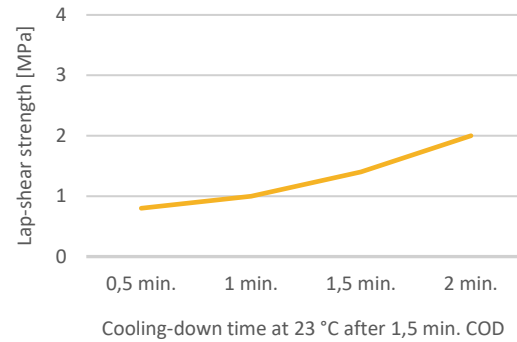
The bead peel test results above (tested before and after common OEM ageing simulations) display fracture patterns demonstrating how stable and reliable adhesion can be obtained with SikaForce®-821 L06 without any physical activation process of the substrates. This offers leaner substrate preparation and bonding processes on important spoiler materials and other components made of PC blends.

STRENGTH BUILD-UP PERFORMANCE

ROOM TEMPERATURE CONDITIONS HEAT ACCELERATION



Handling-strength reached within 60 min. at 23 °C ambient conditions



With heat input (1,5 min. COD), handling-strength can be reached within 2 min. totally

Spoiler bonding processes are typically driven by short cycle times. In many cases, a heat acceleration of the adhesive is mandatory 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.

With heat acceleration (COD), strength values > 1 MPa can be achieved within 3 min. Very fast bonding processes can be ensured with SikaForce®-821 L06.

OUTLOOK

We propose SikaForce®-821 L06 for spoiler bonding applications and other component bonding applications, wherever stable and long-term resistant adhesion on PC grades and its blends is required. Let's keep in touch and please join us for writing new success stories with a new generation of SikaForce® for spoiler bonding.



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Assembly Line Adhesives

Supporting spoiler, liftgate
and glass bonding solutions

For more details on Sika solutions for Automotive contact us or visit our website

www.sika-automotive.com

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