

NEW RELEASE

SikaForce®-820 L06 FOR POLYCARBONATE BONDING

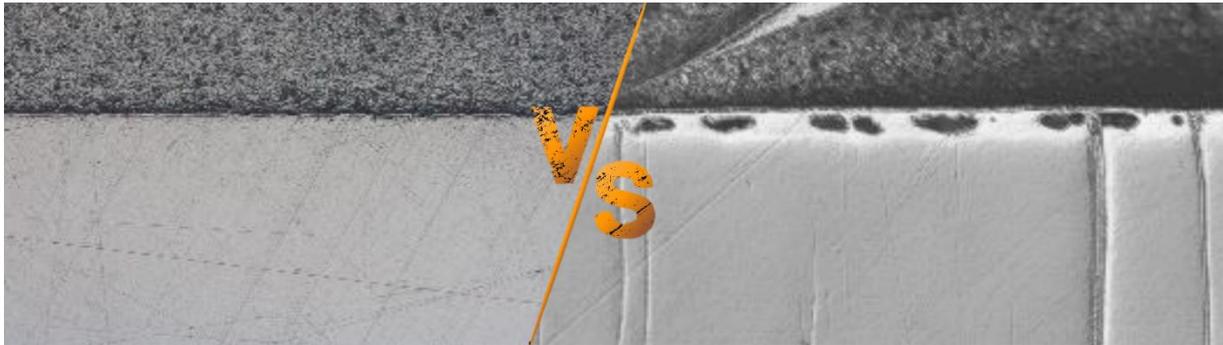


Fig.1: Cross section of a polycarbonate specimen using SikaForce®-820 L06 vs. standard PUR

EXECUTIVE SUMMARY

Polycarbonate (PC) is one of the most fascinating polymers used in Automotive Industry. It's clear and tough behavior makes it an ideal solution for many applications in designed interior and exterior parts. Due to the stress cracking susceptible behavior of PC, joining processes play a major role.

Environmental Stress Cracking (ESC) occurs when polymers are stressed, and a critical substance is present. Many adhesives contain these critical substrates like plasticizer, solvents, or even just certain monomers.

SikaForce® adhesives have been in use for many years and have proven themselves in numerous projects and applications. Flexible or semi-structural bonds, with high requirements, for long-term robustness and weather resistance are key functions of SikaForce® adhesives. The high processability requirements in the automotive industry, for PC bonding, require short cycle times and pretreatment less application. With SikaForce® adhesives, highly industrialized and automated performance can be achieved in joining assembly parts such as spoilers, roofs, and decorative components.

The new SikaForce®-820 L06 adhesive complements the strong SikaForce® portfolio. SikaForce®-820 L06 is a flexible adhesive that offers new benefits for customers who need a strong bond on PC without the risk of stress cracking. Fast cure, good nonsagging behavior and processing properties make SikaForce®-820 L06 the specialist for automated applications in PC and PC blend bonding.

ADVANTAGES AT A GLANCE

- Process simplification- due to adjusted flow behavior and the correct balance of open time and strength build-up
- Absence of plasticizer in the formulation minimizes risk for Environmental Stress Cracking (ESC)
- Good adhesion to PC and PC-Blends without physical or chemical pretreatment
- Superior sagging behavior allows for high applicable bead thicknesses and a remarkable tolerance compensation

KEY DATA

| PROPERTIES | TYPICAL VALUES |
|-----------------------------------|----------------|
| Mixing ratio (by volume) | 2:1 |
| Tensile strength | 3.5 MPa |
| Elongation at break | 350 % |
| E-Modulus (0,5 – 5 %) | 7 MPa |
| Tensile lap-shear strength | 2.5 MPa |
| Open time at (23 °C / 50 % r. h.) | 3 min |

SAGGING BEHAVIOR



Round and triangle bead could be applied to a compressed bead thickness of 6 mm

STRESS CRACKING



PC specimen using SikaForce®-820 L06



PC Specimen using a standard PUR adhesive

NEWS FROM THE MARKET

The first projects are underway using SikaForce®-820 L06 to bond PC covers for roof modules without pretreatment. These projects demonstrate that the formulation of the new SikaForce®-820 L06 results in reliable bonding without stress cracking in the field.

The result of a strong global network in all regions and close cooperation between all stakeholders and experts enabled Sika once again to help customers write success stories.

OUTLOOK

Further new SikaForce®-8XX products in our pipeline – stay tuned!



Florian Altenwegner

Product Manager

Assembly Line Adhesives

Supporting roof, headlamp and
direct glazing bonding solutions

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

www.sika-automotive.com

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