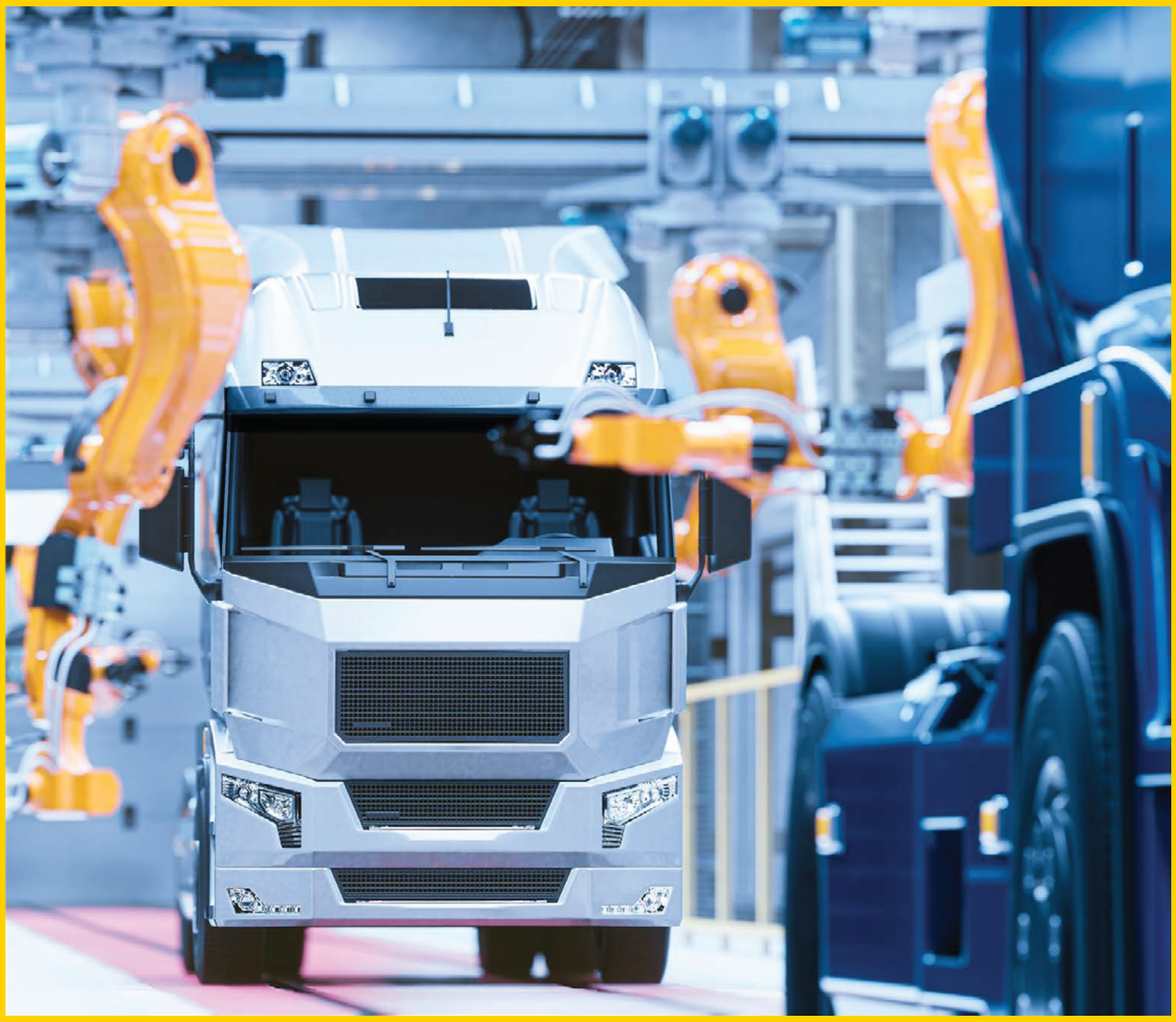


IMPROVED PROCESS CONTROL
EASY DETECTION OF PRE-TREATMENTS

BUILDING TRUST

ADHESIVE BONDING

The most versatile joining technique

Adhesive bonding has established itself as a state-of-the-art joining method in industrial manufacturing. Its key benefits include the elimination of stress peaks, reduction of corrosion, improvement of processes, and realization of multi-material designs.

DIN 6701 SUPPORT

Test procedure recommendations, material cards, product and safety data sheets.

PRODUCTS

Various pre-treatment solutions available with luminescent dye.

TOOLS

Advice and support for manual and automatic detection.

CONTROL

Provision of various services to verify and enhance quality through adhesion and mechanical product tests, line audits, and application tool recommendations.

IMPROVED PROCESS CONTROL

TRAINING

Customer support in terms of theoretical and practical training, product handling and stewardship.

TRACEABILITY

Product traceability (ISO/TS 16949), extended quality control and documentation.

SERVICE

System engineering support for pumps and hand application tools, with handling advice and guidelines.

DIN 2304 SUPPORT

Customer support in line with DIN 2304, with documentation, checklists, and guidelines.

ADHESIVE BONDING requires controlled and reliable pro-cesses and bonding substrate quality as well as procedural documentation.

THE IMPLEMENTATION OF DIN 6701 for the rail industry and DIN 2304 for the general manufacturing industry has enhanced quality and reliability in the control and documentation of adhesive bonding processes.

SIKA AS A LEADER IN INDUSTRIAL ADHESIVES helps its customers to comply with these standards and implements control and safety mechanisms to ensure top-quality bonding.

SOLUTIONS FOR ENHANCED PROCESSES AND TRACEABILITY

TRACEABILITY OF ADHESIVE PRODUCTS
DIN 6701 and DIN 2304 require the proper traceability of products used in bonding processes.

Adhesive applicators are required to document:
- Products used for surface preparation
- Products used for bonding
- Batch number of products used
- Expiry date of products used
- Signature confirming process execution in accordance with bonding instructions

Sika provides its products with a data matrix code that facilitates scanning of the product label for entry of all relevant batch data in the digital process control sheets. Limitations may exist due to the size of labels.

Sika's data matrix code (DMC) contains the following information:
- Global Trade Item Number (GITN): (01)
- Batch Number (10)
- Expiry Date (15)
- Sika Article Code (240)

The DMC is coded in accordance with the industry standard and can be read by most industrial solutions.

IMPROVED PROCESS CONTROL THROUGH DETECTABLE PRE-TREATMENT

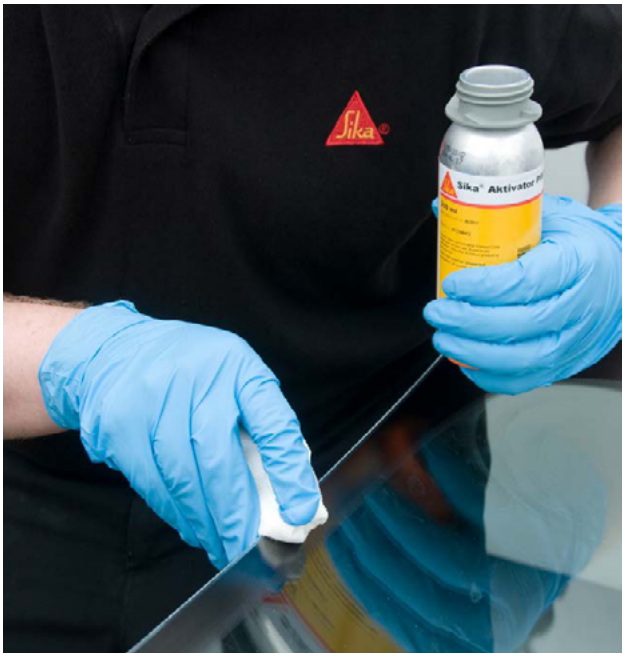
Cleaning and surface preparation are often required to achieve a bonding surface of adequate and consistent quality. Compliance with this requirement is crucial for the bond quality and performance as well as for the final product. As cleaners and clear surface preparation products are generally invisible, there is no means of verifying the existance of pre-treatment. Although the use of colored primers offers a solution, this is often not desirable.

SMART SURFACE PREPARATION SOLUTIONS FOR ENHANCED IN-PROCESS CONTROL
Sika has developed a series of pre-treatment products incorporating luminescent dyes for easy detection with UV light. Treated surfaces will temporarily luminesce when exposed to UV light. These solutions thus provide a visible detection method for verifying primer application and align well with the process control and safety requirements under DIN 6301 and DIN 2304.

- Detection of clear Sika® Aktivator products on any kind of substrate
- Detection of selected colored Sika® Primer products, e.g. black primer on black frit of windshields

These solutions ensure that critical bonding process steps are carried out and improve overall quality performance.

DETECTION OF PRE-TREATMENT
Both manual and automated processes are available for detection, e.g. in case of malfunctions in an automated application.



AUTOMATIC SENSOR

The vision system can detect location, coverage, breaks or gaps, reduced widths, and diagonal breaks. It works on all colors and is fully adjustable to meet each customer's specifications. These systems are highly customized to particular design and manufacturing requirements. Sika's System Engineering Department can provide guidance for system integrators.

MANUAL

Detection by simple UV torch that provides the required wavelength of 320–420 nm.

SIKA'S LUM SURFACE PRE-TREATMENT PORTFOLIO

Sika's standard clear primer solutions are now available with this detection feature. The relevant products include "LUM" in their name and co-exist with the standard versions. Prior to application, adhesion tests need to be performed on the existing bonding substrate.

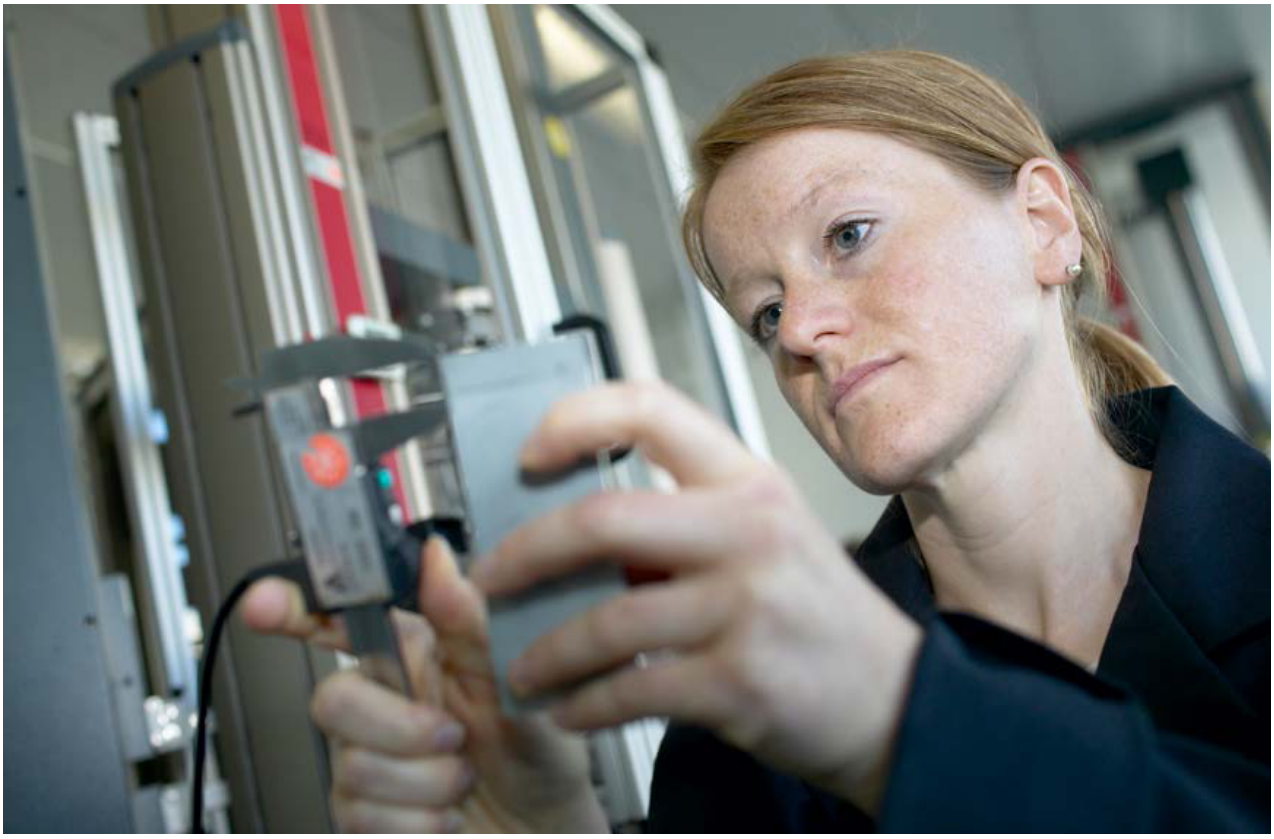
	Sika®Aktivator-205 LUM	Sika®Aktivator-306 LUM	Sika®Primer-207	Sika®Primer-507
Description	Transparent, detectable adhesion promoter for non-porous substrates	Detectable adhesion promoter for coatings	Detectable, pigmented primer for various substrates	Purform® based, detectable, pigmented primer for various substrates
Area of application	Adhesion promoter for metals, plastics, glazed ceramics, and painted substrates	Adhesion promoter for coil powder coats, stove enamel, and painted or primed substrates	Used on a wide range of substrates, such as glass, ceramic coats, plastics, paints, E-coats, and metals	Used on a wide range of substrates, such as glass, ceramic coats, plastics, paints, E-coats, and metals
Available packaging	1000 ml bottle 5000 ml bottle	250 ml bottle 1000 ml bottle	250 ml bottle 1000 ml bottle	250 ml bottle 1000 ml bottle

ADHESION PERFORMANCE

The adhesion performance of the LUM pre-treatments is the same as that of the corresponding standard pre-treatments available from Sika. This applies for all versions incorporating luminescent dye. They have been used successfully on various paints, ceramic coatings, glass, specific metals, e.g. various aluminum and steel grades, and some plastics. Prior to implementation, adhesion trials are, however, recommended on the specific substrates in use.

DURABILITY OF LUM EFFECT

The luminescent effect remains for a number of days after application. When the surfaces are exposed to sunlight, the effect will fade away. As a result, detection after months or years is not possible. The solutions are designed for process control only.



MOVING INDUSTRIES FORWARD

COMBINING GLOBAL REACH WITH LOCAL EXPERTISE

WHO WE ARE

Sika is a specialty chemicals company with a globally leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protection in the building sector and industrial manufacturing. Sika has subsidiaries in 102 countries around the world and, in over 400 factories, produces innovative technologies for customers worldwide. In doing so, it plays a crucial role in enabling the transformation of the construction and transportation sector toward greater environmental compatibility. With more than 34,000 employees, the company generated sales of CHF 11.76 billion in 2024.

FOR MORE INFORMATION:
automotive.sika.com/battery-TIM

SIKA SERVICES AG
Allmend 2
8967 Widen
Switzerland

Contact
Phone +44 436 40 40
Fax +44 436 55 30
www.sika.com

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