



IMPROVED PROCESS CONTROL
EASY DETECTION OF
PRE-TREATMENTS

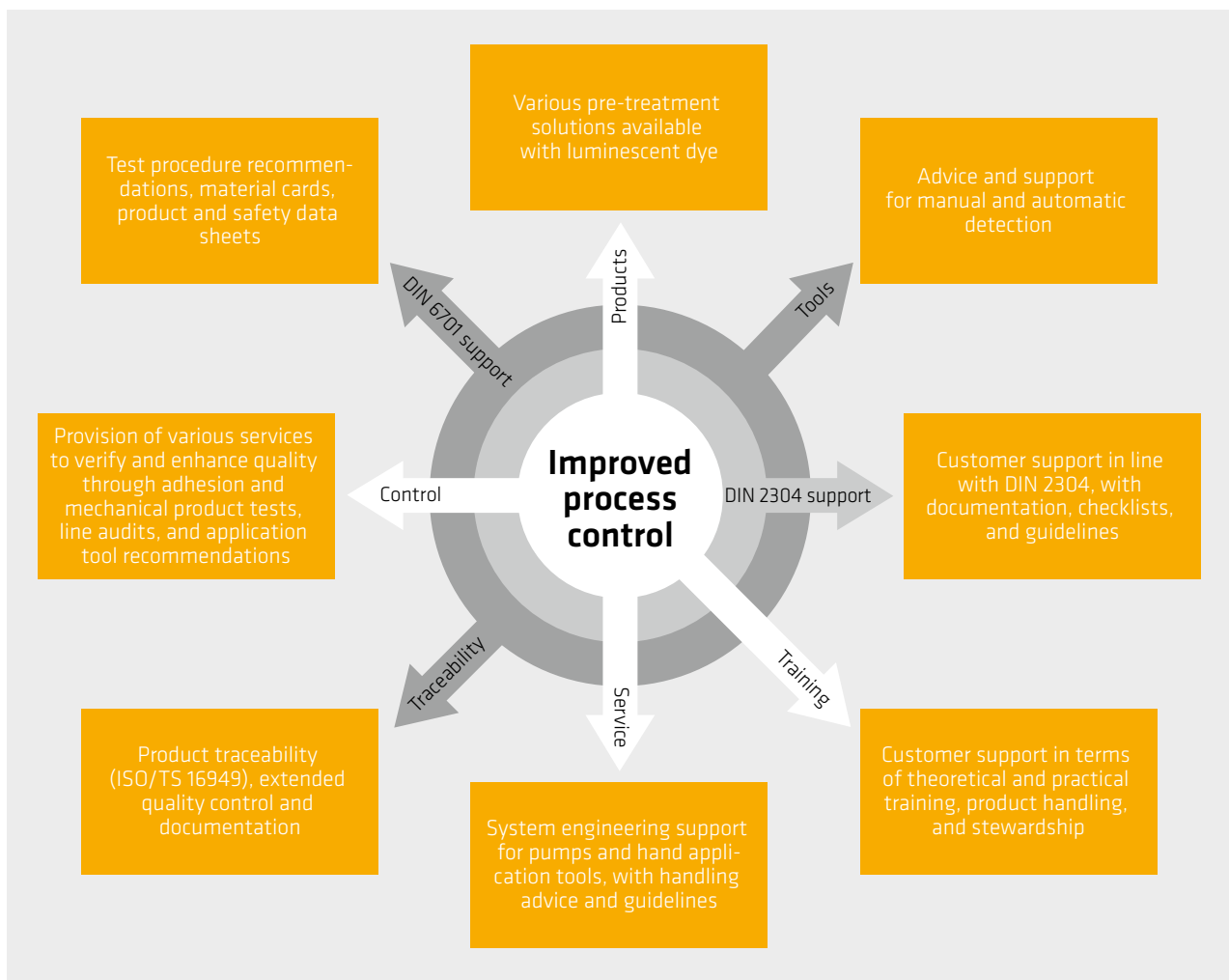
BUILDING TRUST



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.



ADHESIVE BONDING requires controlled and reliable processes 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:

- Product name
- Article code
- Batch number
- Expiry date

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 existence 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

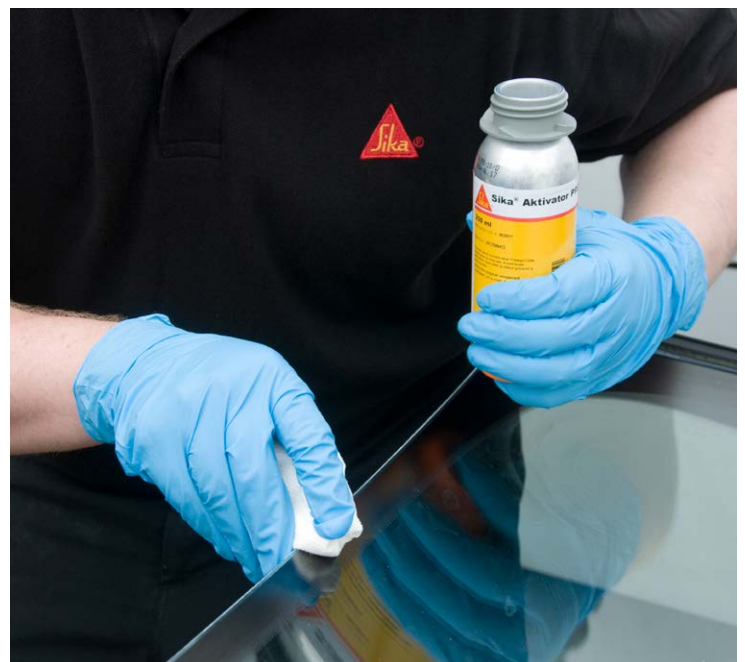
Sika has developed a series of pre-treatment products incorporating luminescent dyes for easy detection with UV light. Treated surfaces will temporarily luminesce when exposed to UV light. These solutions thus provide a visible detection method for verifying primer application and align well with the 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

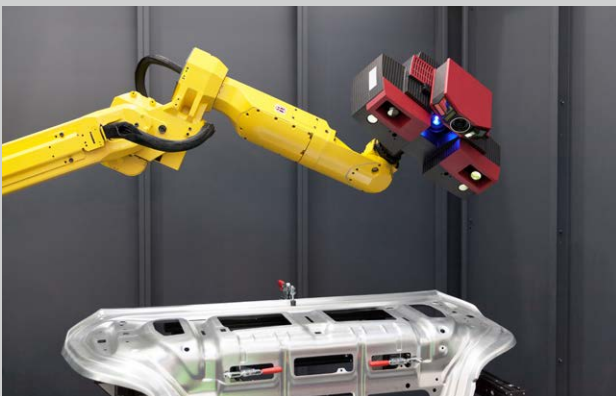
These solutions ensure that critical bonding process steps are carried out and improve overall quality performance.

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 nm - 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-110 LUM	Sika® Aktivator-205 LUM	Sika® Aktivator-306 LUM	Sika® Primer-207
Reference product w/o LUM	Sika® Aktivator-100	Sika® Aktivator-205	--	--
Description	Transparent, detectable adhesion promoter for various substrates	Transparent, detectable adhesion promoter for non-porous substrates	Adhesion promoter for coatings	Pigmented primer for various substrates
Area of application	Float glass, ceramic screen prints, and painted substrates	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 float glass, ceramic coats, plastics, paints, E-coats, and metals
Available packaging	1000 ml bottle	1000 ml bottle 5000 ml bottle	250 ml bottle 1000 ml bottle	250 ml bottle 1000 ml bottle

ADHESION PERFORMANCE

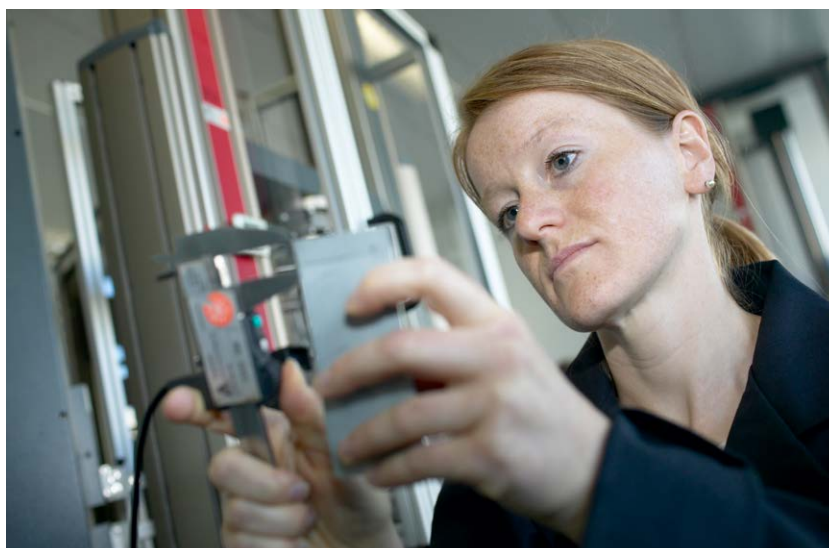
The adhesion performance of the LUM pre-treatments is the same as that of the corresponding standard pre-treatments available from Sika. This applies for all versions incorporating luminescent dye. They have been used successfully on various paints, ceramic coatings, glass, specific metals, e.g. various 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.



Watch UV visibility of Sika® Primer-207



GLOBAL BUT LOCAL PARTNERSHIP



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www.sika.com/transportation

WHO WE ARE

Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing, and protecting loadbearing structures. Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply.
Please consult the Data Sheet prior to any use and processing.



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