Steinhagen, 17.08.2021

**Plasma instead of primer**

Atmospheric-pressure plasma: An efficient solution for all surface treatments

**The success of adhesive bonding and sealing processes depends largely on the surface properties of the substrate. For highly adhesive, media-tight bonds, appropriate pretreatment is usually essential. Plasmatreat's atmospheric plasma technology requires virtually no chemicals, reduces effort, cycle times and costs, and makes long-lasting adhesive bonds possible.**

For reasons of productivity, cost, and the environment, companies are increasingly abandoning the use of chemical substances or “primers” as bonding agents. One efficient, reliable, and cost-effective alternative is treatment of the substrate surface with atmospheric-pressure plasma. Pretreatment with Openair-Plasma® from Plasmatreat increases the adhesion and wettability of surfaces, thus enabling the use of more cost-effective material alternatives and new types of material composites while maintaining the quality of the end products.

The plasma process is dry, non-contact, selective in location, and fast. It cleans the surface with microfine precision and activates it at the molecular level. The technique uses a comprehensive process-control system and is fully robot-compatible and inline-capable. Production speeds are often increased many times over, reducing manpower, and increasing productivity. For more specific requirements, functionalized coatings can be applied to the surfaces of materials using the special PlasmaPlus process. With the PT-Bond coating process, even plastics that were previously difficult to bond can be bonded directly and permanently with elastic adhesives. Primers that are harmful to the environment and health can be replaced.

To create a bond to adhesives and sealing compounds with plasma, only the part of the material on which the adhesive will be applied is modified. As opposed to primers, this can be controlled with pinpoint accuracy and intensity. This means that, simply by selecting the parameters, a wide variety of materials can be pretreated with a plasma system: from metals, for which high plasma intensities with high energies can be used, to a variety of materials which require less energy, to sensitive electronic components requiring treatment with only minimal intensity.

Whether it is structural adhesive bonding in automobiles, sealing in electronics or fast, bubble-free wet labeling with high initial strength – thanks to Openair-Plasma and modern solvent-free adhesives, manufacturing processes can now be carried out entirely without chemical waste. This is equally true for printing and painting. The high surface energy generated by Openair-Plasma ensures uniform paint distribution and optimal bonding.

(2.913 characters with spaces)

**About Plasmatreat**

Plasmatreat is an international leader in the development and manufacture of atmospheric plasma systems for the pretreatment of substrate surfaces. Whether plastic, metal, glass or paper - the industrial use of plasma technology modifies the properties of the surface in favor of the process requirements.

Openair-Plasma® technology is used in automated and continuous manufacturing processes in almost every industrial sector. Examples include the automotive, electronics, transportation, packaging, consumer goods and textile industry, but the technology, cost and environmental advantages of the plasma technology are used in medical technology and in the renewable energy sector as well.

The Plasmatreat Group has technology centers in Germany, USA, Canada, China, and Japan. With its worldwide sales and service network, the company is represented in more than 30 countries by subsidiaries and sales partners.

For more information, please visit: [www.plasmatreat.com](http://www.plasmatreat.com)

(968 characters with spaces)

**Images:**



PT-Bond:

A PT-Bond coating is applied to seal a plastic housing

Image: Plasmatreat