

Adhesion

- ✓ **Strong adhesion know-how for multiple substrates**
- ✓ **Expertise in activation pre-treatments**
- ✓ **Smart throughput screening**
- ✓ **Tailor-made adhesion promoters**



CHEMSTREAM
SUSTAINABLE CHEMISTRY

Adhesion: the challenging process

Adhesion, or lack of it, is one of the most critical attributes for most coatings and inks. Adhesion could be applied to a myriad of substrates, from low to high surface energy.

From metallic substrates with high surface energy like copper or aluminum to polyethylene, polypropylene or Teflon with very low surface energy.

Low energy substrates are, by definition, non-wetting which is in detrimental for a good adhesion. Therefore, they need a pretreatment that activates the surface creating anchoring points where the ink could attach.

In the case of high energy substrates, the pre-treatment will be used to remove impurities that would hamper adhesion. Some examples of pre-treatments are plasma, corona or UV-ozone.

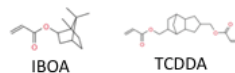
Focus

- ✓ Adhesion know-how in varied substrates.
- ✓ Expertise in activation and cleaning pre-treatments (Plasma, corona, UV-ozone)
- ✓ Excellent adhesion to difficult substrates thanks to our tailor-made adhesion promoters.
- ✓ Personalized primer/ink design depending on the type of substrate.
- ✓ Short development time thanks to a smart throughput screening.

ChemStream's UV curable Adhesion Primer and/or Customized ink

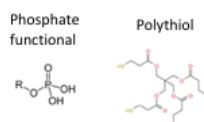
Plastics

Pre-treatment (Activation)
Monofunctional monomers Low shrinking



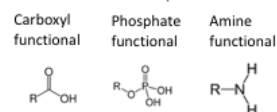
Copper

Use of adhesion promoters



Anodized Aluminium

Use of adhesion promoters



Glass

Pre-treatment (Hydrolysing)

Use of adhesion promoters



CHEMSTREAM
SUSTAINABLE CHEMISTRY

ChemStream, an innovative chemical R&D company, is specialized in translating material problems in sustainable formulations with focus on high performing nano-dispersions, functional coatings and inkjet inks. The R&D core team has more than 20 years experience in application driven and customized product development. ChemStream has its own lab facilities for chemical synthesis, formulating and characterizing from design to end user product.