

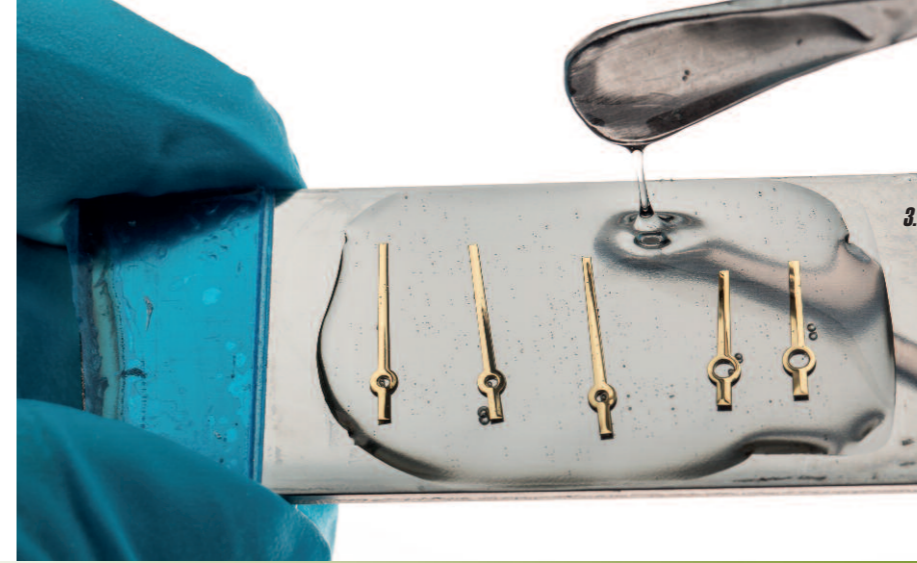


«We use our creative genius where there is no existing solution to answer specific needs of our customers.»

Dr Khalid Zahouily,
CEO Horlovia Chemicals

Through its research and development work focusing on innovative processes using photopolymerization, the Horlovia Chemicals company, based in La Chaux-de-Fonds, provides the luxury watchmaking industry with solutions that are not only highly efficient but also environmentally-friendly.

Creative added value in the watchmaking sector



1. High transparency of UV curable peelable protective coating.
2. The 3D dropjet printer H-cube.
3. Temporary adhesives.
4. Bally flexometer test for UV curable inkjet on leather.

This collaboration with leading watch manufacturers made Dr Khalid Zahouily - who holds a PhD in chemistry and photopolymers and is recognized as international expert in photopolymerization and nanotechnology materials - realise how limited the range of chemical solutions available to this sector was, in terms of innovative chemistry - inks, coatings, solvent-free adhesives- etc. And so, to address this gap in provision, the research and development facilities of Horlovia Chemicals were set up in La Chaux-de-Fonds (Switzerland). The company's founder-director has made it his mission «to give the watchmaking industry access to the solutions it needs in order to develop innovative and environmentally-friendly products that uphold the quality image of the Made in Switzerland trademark.»

Know-how developed at the CNRS

Through his extensive expertise developed at France's National Centre for Scientific Research (CNRS) and his work with household names in the luxury, aeronautical and optical sectors, he has a clear understanding of the needs of watch manufacturers in the land of watchmaking. Horlovia Chemicals' team of engineers and researchers provide in-depth chemical consultancy in chemical expertise. As skilled craftsmen and pioneers of their trade, they sell and if necessary develop tailor-made solutions that not only meet but also exceed and anticipate client requirements - solutions that are being implemented by the greatest names in watchmaking.

Watchmakers now have access to tailor-made bonding, inks and coating solu-

tions based on new generation of hybrid sol-gel technology, a mixture of mineral and organic molecules. This extremely thin coating, invisible on metal, is resistant to both corrosion and abrasion. It also ensures that the item can be displayed and handled without leaving fingerprints, a crucial asset in selling luxury items.

Temporary peelable coatings for selective area protection

Another option is a temporary peelable protective UV curable coating, the result of four-years' research by Horlovia Chemicals. This patented peelable high transparency film is applied using the dropjet 3D H-Cube digital printer. It comes in the form of an ultra-transparent photopolymerizable coating. Applied selectively on watch cases, it provides valuable protection during inspection by consumers. The 3D H-Cube - unveiled as a world first at the recent EPHJ trade fair in Geneva - is in the form of a cube of only 80 cm x 80 cm x 80 cm. Small though it is, it also supports the application of a temporary protective coating on the polished parts of the housing during assembly. Horlovia Chemicals has also developed other selective application solutions to apply protection to, for instance, engraved components.

Development and marketing of new solutions

In order to maximise Horlovia Chemicals' contribution to their business, several manufacturers of top-of-the-range Swiss watches have entered into ongoing technical support agreements. Projects undertaken to date include the

development of solvent-free temporary adhesives for the gluing of sapphires, fixed with a few microns of solvent-free glue using photopolymerization techniques. Another technology being pioneered is the inkjet dropjet system, a sophisticated version of the ink-jet, which is ideal for functionalizing and customizing watches produced in small series.

Dr Khalid Zahouily, who continues to build on his own expertise and that of his team, says: «Horlovia Chemicals' primary strength lies in our ability to use our creative genius where there is no existing solution, in order to formulate new processes tailored to the specific needs of our customers.» These solutions are not only innovative but are also respectful of the environment, making them fully synonymous with creative added-value for the Swiss watchmaking industry. The manufacturers of the land of watchmaking, major players in the 21st century's luxury sector, now have another asset that will add strength to their quality image.

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