

## New developments in the world of POLYURETHANE ADHESIVES

The furniture market is constantly evolving. More and more materials other than wood are being used, but with very similar finishes from an aesthetic point of view.

TAKA's new addition to the family of Hot Melt Reactive Polyurethanes (HMPUR) is the 2308.38P. This adhesive was developed with raw materials produced entirely within TAKA and specially formulated to give this product very precise yet versatile characteristics for the production of MDF and chipboard profiles and for flat or soft-formed panels.

2308.38P is suitable for bonding various types of foil such as paper, PVC, PET and PP even at low substrate temperatures.

One of the more recently used films is Polypropylene (PP), with a very low thicknesses of 0.1-0.15 mm that is very sensitive to temperature. This is one of the reasons why TAKA developed the product 1308.18, which can be applied as

low as 90°C, thus reducing the contact temperature with the coating head and avoiding the formation of bubbles and creases.

The 1308.18 is also used in the production of flat panels with glue heads of up to 1350 mm for the application of films for exterior door panels. Due to its low viscosity, it is very well suited for application at low temperatures and allows good bonding even with poorly heated panels. 1308.18 is used in the gluing of exterior foils. In addition, it provides weather resistance that meets the requirements of RAL GZ 716.

**TO FIND OUT MORE ABOUT 2308.38P, 1308.18 OR ANY OTHER TAKA ADHESIVE SEND AN EMAIL TO: [INFO@TAKA.IT](mailto:INFO@TAKA.IT)**



## ABOUT US Matteo: 20 years of growth



This past July 16th, we celebrated the 20th anniversary of our Technical Support Manager, Matteo Battirossi.

Matteo, a key resource in our organisation, began his career in 2001 just two years after WPR was founded. During these two decades, he has witnessed the growth, change and technological innovation that distinguishes us.

Over the years, he has always shown that he is up to all challenges, contributing ideas, time and sacrifice to make WPR the market point of reference, demonstrating that it is possible to make a passion of your work.

We asked him a few years ago what it means to him to be part of the WPR-TAKA family, and he confirms that his

words still hold true today: "WPR is my life, I grew up here, I came here in my twenties and now I'm over 40. It was my first work experience and I'm still here because I've always believed in it. With all the difficulties that there are, with all the challenges and trials that I have experienced, I continue to believe in it, to do my job with passion and I am sure that

this road will continue to take me very far!" We are proud to have people like Matteo in our team and look forward to continuing to grow together!

# LOOKING AROUND

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## Nobilitation and environmental awareness

### Wood: Nature's miracle

Wood is a natural product with excellent strength characteristics and has always been an important construction material.

As in the rest of the world, wood was widely used in Italy as a raw material for the construction of houses and other buildings until the 1920s.

It was later replaced by brick and concrete. Today it is regaining its importance, thanks to growing environmental awareness.

Currently, the furniture industry processes solid wood, chipboard, plywood, moulded wood, OSB and MDF. Foils with finishes that faithfully reproduce the texture of wood are used to laminate various types of wood-based materials.

Trendy decors that increase the hardness, scratch and solvent resistance of the surface, make the final product ideal for the furniture world.

Foiling profiles and panels with polyurethane adhesives is gaining ground over varnishing and outdated wrapping technologies.

The use of PUR allows the application of a wide variety of finishes while reducing processing times and consequently the space required for processing and storage, with a far lower environmental impact than other types of adhesives and technologies.

In fact, with PUR adhesives, emissions into the atmosphere are reduced to zero compared to varnishing, which emits large quantities of VOCs.

In addition, the use of HMPUR adhesives has totally eliminated the harmful fumes of the old urea-formaldehyde-based adhesives.

Thanks to vertical integration, TAKA is able to effectively develop types of adhesives that can adapt to the constant evolution of the materials used in the production of profiles and foiled panels, while its research laboratories provide important support for its customers' projects.

The contribution of the WPR-TAKA ACADEMY is unparalleled, as we teach the application know-how that is fundamental for the success of the finished product.



GIORGIO COSTENARO  
PRESIDENT TAKA

*Giorgio Costenaro*

### ACADEMY TIPS HMPUR vs. PO

### Which is best? Bonding with hot melt Polyurethane (HMPUR) or Polyolefin (PO)?

Today, manufacturing a profile or panel is quite easy as the technology of foils and machines has evolved remarkably over the last years.

What remains crucial is the choice of the hot melt adhesive: Physical bonding (polyolefin -or EVA)(Thermoplastic) or physical + chemical bonding (HMPUR/Thermoset)?

All materials have different characteristics. Polyolefin (PO) is an adhesive where bonding only takes place physically (melting of the glue, application and bonding by cooling).

When heating the profile, the glue activates again (Thermoplastic).

Hot melt polyurethane adhesive (HMPUR), on the other hand, bonds in two steps: the first is physical (melting of the adhesive, application and the adhesion occurs by the reduction of temperature) and then the second phase begins after processing, where the chemical cross-linking between the materials and the adhesive takes place.

(Thermoset) This chemical reaction gives the laminated profile a very high level of water and temperature resistance.

These two aspects are essential for materials intended for the production of kitchen and bathroom furniture but are also very important for transportation in containers where temperatures of above 70°C and humidity can be reached. Another advantage of HMPUR over PO is the wide range of foils and substrate materials that can be processed.

HMPUR adhesives are also preferable in terms of sustainability and energy savings as they are used at low temperatures (110-140°C) compared to PO which has to be applied at 160-200°C.



Certain raw materials in POs can burn quickly causing blockages in the application systems.

In addition, the application coat weights of HMPUR are 30-50% lower than the coat weights of PO.

In the production of interior doors, HMPUR adhesives have made it possible to qualitatively raise the strength of jambs and architraves. The photo shows an example of a door jamb glued with PO adhesives. The use of HMPUR adhesives



avoids the obvious deterioration of the final product.

Today, thanks to the new generation of equipment (melters, glue heads, etc.), which have been developed to use any kind of adhesive, hot melt polyurethane glue is still the most versatile adhesive.

*If you want to know more about WPR-TAKA's HMPUR adhesives or for information on other applications, please contact the WPR-TAKA Academy at [academy@wprtaka.it](mailto:academy@wprtaka.it)*

TO DISCOVER THE MANY COURSES AND TRAINING ACTIVITIES OFFERED BY OUR ACADEMY, PLEASE INQUIRE BY E-MAIL AT [ACADEMY@WPRTAKA.IT](mailto:ACADEMY@WPRTAKA.IT)

## Stilcurvi



CLAUDIO ZAMAI  
OWNER

Stilcurvi srl was founded in 1986 as a company dedicated to the production of semi-finished curved wooden products for the furniture industry.

Today it has about 180 employees and 3 production units, for a total of about 75,000 square metres of covered surface area.

Changing market trends have prompted the company to expand its product range and invest in new technology.

For example, a UV varnishing line acquired at the beginning of the 2000s, equipped with two automated defect detection systems, which is highly appreciated by the most demanding customers, or the calendaring line which allows the company to vertically integrate upstream as well, thus becoming completely autonomous in the production of a wide range of different processes.

The distinguishing feature of this

company is versatility.

In other words, the ability to offer customers a varied commercial proposition, ranging from UV varnished to calendared polymeric foils, from veneer to melamine.

Claudio Zamai, owner of Stilcurvi, added: "TAKA adhesives offer us reliability and consistency in any situation, which are essential characteristics for a glue that can only be achieved by means of well-planned procurement processes and meticulous control of incoming raw materials: in all this WPR-TAKA have always proved to be up to our requirements."

In addition, a partnership such as the one between Stilcurvi and WPR-TAKA brings tangible benefits to both companies: while Stilcurvi has an absolute need for a top-quality adhesive, WPR-TAKA also needs feedback from customers in the field in order to continue moving forward

with their research and development.

Moreover, the close relationship established over time with WPR-TAKA makes it possible to improve knowledge of the adhesive and the bonding process day after day, thanks to the valuable assistance and advice of their technicians.

In conclusion Zamai states that: "In an increasingly competitive and demanding market, it is now essential for every company to count on real partners for the supply of the most strategic raw materials for the production processes: only in this way is it possible to guarantee its customers high quality standards and continuity of supply".

To find out more about Stilcurvi's wide range of products and processes, please visit their website:

[www.stilcurvi.it](http://www.stilcurvi.it)

## Windoar



WINDOOR has been on the market since 2003 and is one of the leading producers of interior doors in Poland.

The company operates from a modern production base in Radom and their success is based on the use of high quality materials and attention to detail in the manufacturing process.

The commitment and mission of Stanisław Redestowicz, owner of Windoor, is to use high quality raw materials for production,

as the use of substandard components increases labour costs and always generates a higher level of scrap.

This choice defines Windoor as an environmentally responsible manufacturer and facilitates their initiatives on ecological protection aspects.

As part of these efforts to minimise production waste (and therefore environmental impact), Windoor supplies the market with WPC panels (Wood-Plastic Composite), a product that combines the beauty and strength of wood with the functionality of a polymer.

Growing market demands and limitations

in the efficiency of the finishing process led Windoor to purchase a new foiling machine.

After evaluating several options, they decided on WPR, which offered the best technical solutions and the broadest experience of the wrapping process. Redestowicz adds: "Today we know it was an excellent choice.

In return for our trust we received:

- Efficient installation and start-up of the machine,
- Excellent machine operation,
- Very easy set-up and tooling changeover
- High quality and stability of the wrapping process

- Very good contact and fast technical support in problem solving."

Of course (explains Redestowicz), the quality of the foiling is not just a question of machines.

The type and quality of the applied glue also have a significant influence on the end product, on the stable operation of the equipment without the need for constant adjustments, and therefore on the optimal efficiency of the process.

Among the many products tested by Windoor, the best results were obtained by the HMPUR adhesives offered by TAKA.

Stanisław Redestowicz concludes by stating that: "Without quick reactions to our - often changing - requirements, adequate technical support and professional advice as offered by WPR-TAKA, this success would not have been possible."

If you would like to know more about Windoor's interior doors, please visit their website

[www.windoar.pl](http://www.windoar.pl)

