

How Mirbat , a local contractor, became a national supplier of polyurethane insulation

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Mirbat group will supply 6,000 t of insulation to be sprayed and injected to its franchisees and industrial partners. Its industrial unit opened in 2019 should be doubled soon.

Caption: Rodolphe Bagot, Director of TPF Industrie and Head of Product Development and Jean-Michel Tognetti, Chairman of Mirbat Groupe Holding. "Proposing polyurethane for all construction systems. »

With its new industrial site based in an economic activity zone in the town of Noves, south of Avignon, Mirbat Groupe Holding (MGH), chaired by Jean-Michel Tognetti , is taking a particularly original approach in the building sector.

The painting company developed by his father, Jean-Pierre Tognetti , from the end of the 1970s, has evolved into a sort of family start-up which today brings together two networks of installers of sprayed polyurethane insulation in building – Syneris and Oseo – and a polyol production plant – TPF Industrie – one of the two components, along with isocyanate, of the projected material.

The initiative also brings in its wake several partners who develop their activities partly on the basis of this synthetic material: the polyurethane sprayer manufacturer Spray System, the builder of single-family homes with a metal structure Baticonform , the manufacturer of insulation blocks distributed in concrete and polyurethane Thermimur ...



TPF Industrie has 9 silos of 25 tonnes of raw materials and 4 mixers.

An investment of €3.5 million for Mirbat

In August 2020, the TPF Industrie plant in Noves produced its first kilo of polyols. By the end of 2021, it will have supplied 6,000 t and will have generated a turnover of €10 million. The 800 m² factory created in 2019 has an annual production capacity of 25,000 t. Why did you take this industrial turn?

The Mirbat company developed the technical solution for insulating floors, walls and roof spaces by spraying polyurethane from the end of the 2000s. It supplied its networks of applicators with products supplied by the chemist BASF.

The shortage, the reduction in the supply of products and the increase in prices encountered in 2017 made people aware of the great fragility of the company. The idea of becoming a producer of polyol-based formulations quickly took hold and materialized. Mirbat gathered the means and knowledge and took 13 months to raise its investment to a total of €3.5 million.



Mirbat has developed trucks equipped for mixing polyurethane components and used by Syneris franchisees and Oseo dealers .

The only French polyurethane insulation factory

"It's the only French factory," points out Jean-Michel Tognetti when presenting his facilities. The production workshop has nine raw material silos with a capacity of 25 t each, and four mixers.

"We are able to offer standard formulations for projection companies and also custom formulations, for volumes of 500 kg to 20 t", continues Rodolphe Bagot, director of this unit and responsible for product development. The supply on site is carried out by truck and by quantity of one ton, or by container of 200 l.

Structured to respond to the very vast polyurethane market, both in construction and in industry, TPF Industrie has also set up the two traditional pillars essential to development: a research and development lab, and a quality department.

Everything from a big industry

Run by two engineers, Antoine Gimenez and Cassandra Koenig, the R&D laboratory works on formulations, participates in production controls, collects product traceability data, carries out tests for CE marking, etc. It works in tandem with a second laboratory based at the headquarters of MGH, in Montfavet (Vaucluse), which develops "custom" formulations.

The quality department is managed by Anne-Gaelle Estrabaud , assisted by Nicolas Hulin, responsible for monitoring standards. Their role is to prepare the CE marking files, to manage and prepare the technical application documents (DTA) for the technical opinions (currently 12 in number), as well as to meet the requirements of the QB certification of the CSTB such as to inform the FDES sheets (environmental and health declaration sheets) for the different applications. Mastery of this strategic task is all the easier... as they previously worked at the CSTB in Champs-sur-Marne.



Cassandra Koenig and Antoine Gimenez, engineers in the R&D lab. "We are working on product formulation and characterization of production to ensure its quality. »

Make polyurethane a more virtuous product

Among all building insulation products, sprayed polyurethane is the one with the most discussed profile. Efficient, this material has a very low thermal conductivity (λ): around 28 to 30 mW/ mK when that of air is around 26 mW/ mK . This makes it possible to achieve very good thermal resistance with reduced thicknesses.

On the other hand, it is perceived as a synthetic material that is difficult to install – its isocyanate-based formulation requires you to wear a full suit and a breathing mask with forced filtration –, composed of products derived from petroleum chemistry, difficult to recycle and which requires a blowing agent which can exhibit high global warming power.

TPF Industrie says it is taking these difficulties head-on. With regard to polyols, one of the two components of polyurethane, the company says it is investing in research into plant-based production; she hopes to achieve this within a few years.

In addition, at international level, suppliers are working on the creation of isocyanates from plant materials (corn) to be combined with products based on resources of fossil origin. This would make it possible to offer biosourced polyurethane in the medium term, in whole or in part.



The Mirbat teams and their partners during the presentation of the production unit, in Noves, near Avignon.

The problem of waste to manage

As for the problem of waste, the applicators in connection with Mirbat are already confronted with it. The floor insulations projected on the underfloor heating networks must indeed be sanded before the implementation of the slab to present a maximum flatness defect of 7 mm under the rule of 2 m.

The waste is now recovered and landfilled, but it is planned to recycle it. Two methods are put forward: one, simple, by fine grinding and reintroduction into the mixture to be sprayed with a maximum of 10% waste; the other by passing through a reactor to break down the molecules and take them back into new formulations. This last solution is the most ambitious. Manufacturers, such as the American Dow Chemical, have already embarked on this recycling.

Finally, for the blowing agent used, TPF Industrie works with an HFO (hydro fluoro olefin) fluid, 1233 ZD, which has the lowest GWP – global warming potential: 1. Note that the agent previously operated, HFC 365/237, had a GWP of 1,800 eqCO₂. The virtuous approach is therefore only in its infancy.

Already 30 franchisees for Syneris

The networks of applicators of the Mirbat , Syneris and Oseo group are the first outlets for the production of the TPF Industrie workshops. Created in 2006 and developed as a franchise since 2008, Syneris has 30 franchisees and covers all departments.

Equipped with some 110 projection trucks designed and equipped by Mirbat , these contractors are able to treat soils with closed-structure insulation capable of taking up soil loads (at least 150 kPa, generally 250 kPa, i.e. 25 t /m²), the walls and the attic with foams with a more open structure. Each worker is equipped to deal with a new individual house during the day.

Note that if the insulation comes out about 20% more expensive than a mineral solution, it is overall 30% less expensive if we take into account the airtightness effect of the integral treatment of the envelope. .

Syneris also offers, with Giacomini , supplier of hydraulic pipes for underfloor heating, and Anhydritec , formulator of liquid screed for Thermio + floors, a complete Triothem solution for regulated underfloor heating.