

An aerial photograph of an industrial complex. On the left is a multi-story office building with a flat roof and several windows. To its right is a large, long warehouse with a corrugated metal roof and numerous skylights. The word "MORCHEM" is visible on the side of the warehouse. The background shows other industrial buildings and a parking lot with some cars.

MORCHEM

Your Innovation Partner

**MORCHEM
COMPANY
PRESENTATION**



Welcome
To Morchem

MORCHEM
Your Innovation Partner



**Experts in Polyurethane Adhesives
and Coatings**



Always first in Consumer Care and Food Safety



Innovative company geared towards excellence in
R&D, Quality and Sustainability



Since 1985 innovating and supplying PU-adhesives
for flexible packaging, textile lamination, technical
lamination and other markets.

Les Franquises



MORCHEM
Your Innovation Partner

Guadalajara



Excellence

Efficiency

Quality

Responsibility

Innovation

Support

Brief Overview



Family owned company



Founded in 1985, with expertise in Polyurethanes since 1955



Headquarters in Spain



Two plants in Europe:

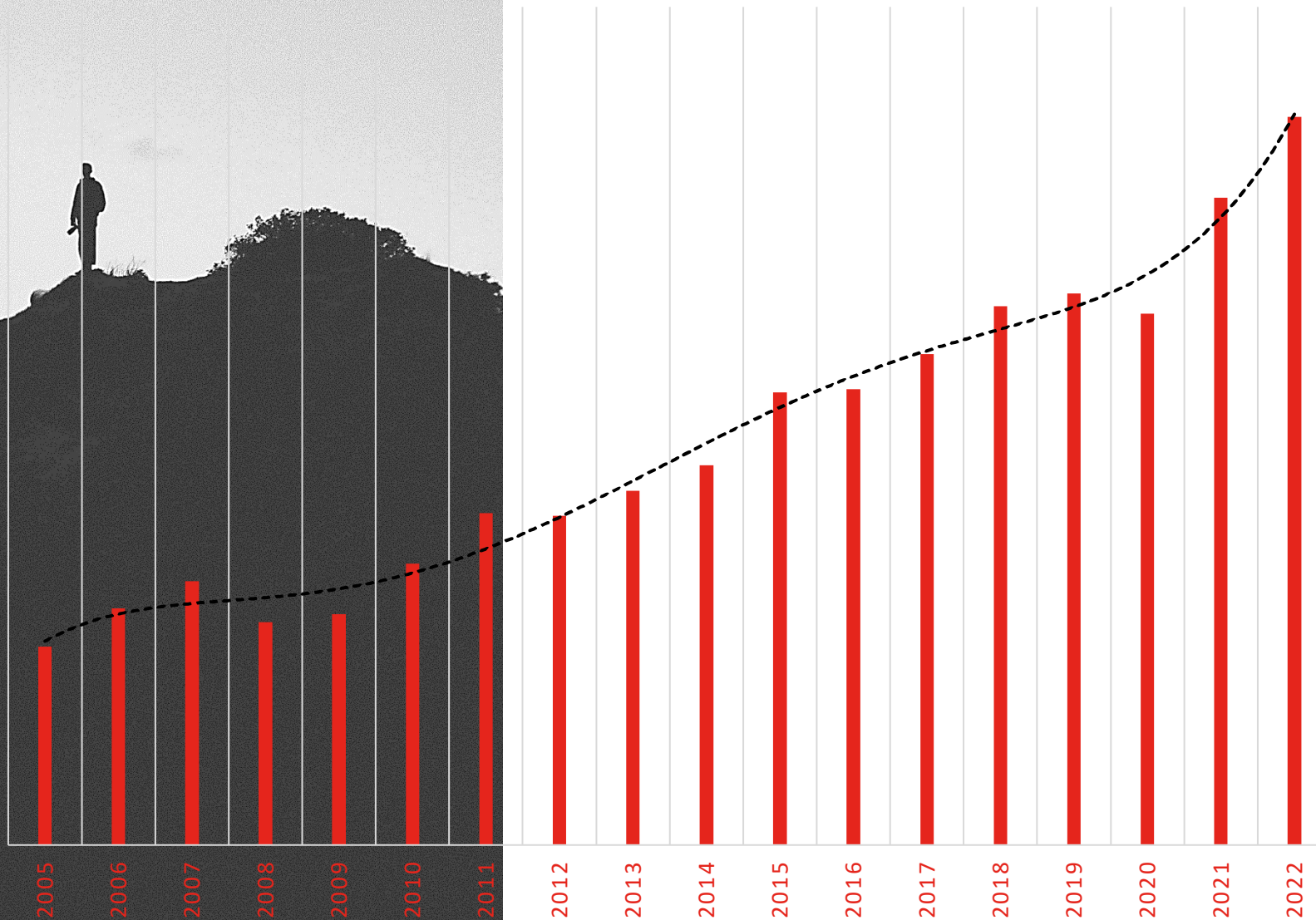
Les Franqueses | Barcelona | Spain

- Manufacturing of PU and Polyester products.
- Scale up of new products and technologies.
- R+D Center of excellence.

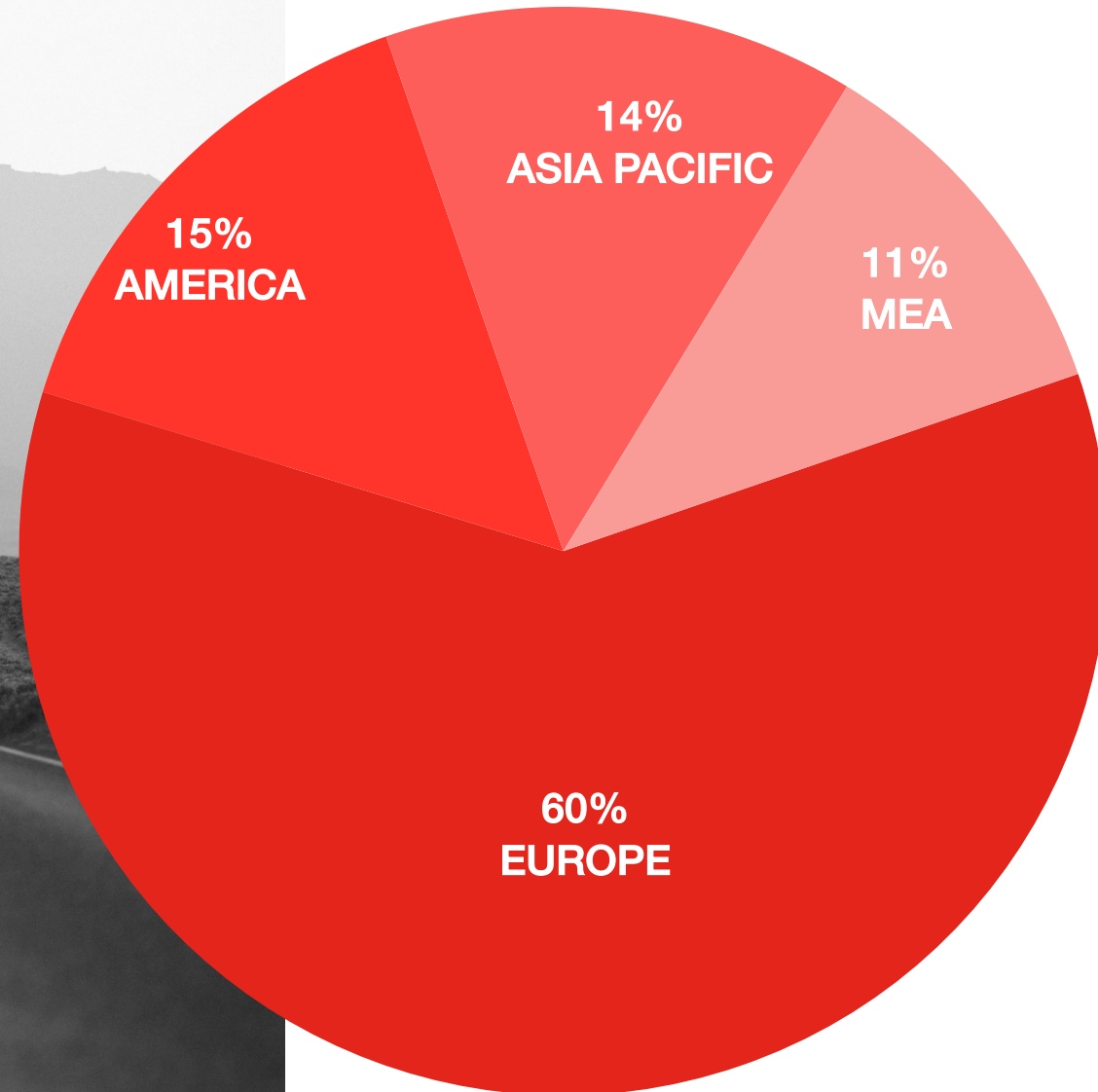
Guadalajara | Spain

- Manufacturing of PU and Polyester products. Focus on high productivity.
- Highest process and control automation in line with 4.0 industry standards
- IT and production back up for other Morchem plants
- Excellent logistic hub with direct shipment to Mediterranean and Atlantic harbours in Spain

Sales Evolution 2005-2022



Sales per Geographical Areas 2021



Global Presence



Production Sites in Europe



2 Plants in Spain



Fully automated production process



Bulk deliveries to EU customers in 22T truckloads



24/7 production schedule working with 5 shifts



Optimized supply-chain procedures and lean management

Highest Level of Fire Protection

From May 2015 Morchem is equipped with the most advanced fire protection system available for the chemical industry.

The system is able to isolate the different areas of the plant and warehouses and fill them up to the roof with dry foam in less than 3 min.

Laboratories and offices equipped with sprinklers and fire suffocating breathable gas.



R & D Pilot Plant



Flexible packaging pilot laminator:

Combi Lamination:

- SB, SF and WB
- Coating unit
- Corona treatment
- Multilayer laminationt



Textile Pilot Laminator

Textile pilot laminator

- ✓ Web to web lamination (wovens, non wovens, films etc.)
- ✓ Gravure Rollers Special for PU RHM





FLEXIBLE PACKAGING

Laminating Adhesives

- Solvent free
- Solvent based
- Water based

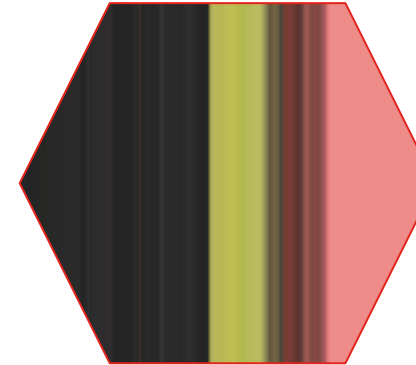
Functional Coatings & Primers



TPU for PRINTING INKS

TPU binders for Gravure & Flexo inks

- Solvent based
- Film former
- Modifier
- Solvent free



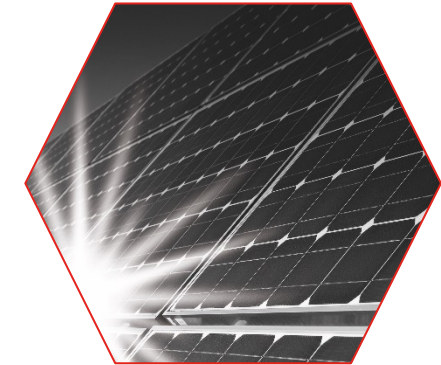
TEXTILE & FLAT LAMINATION

Markets & Applications

- Garment, Lingerie, Footwear,
- Sportswear, Furniture, Flat
- Lamination, Automotive....

Adhesives / Additives:

- Reactive PU-Hotmelt
- Solvent based



TECHNICAL LAMINATION

Markets & Applications

- Photovoltaic
- Electrical
- Cable wrapping
- Insulation
- Sailcloth

Flexible Packaging



FLEXIBLE PACKAGING ADHESIVES, COATINGS AND PRIMERS

FOOD SAFETY IS OUR MAJOR PRIORITY

Wide portfolio range of adhesive and coating technologies to meet customer needs in the flexible packaging industry for different types of markets: Human food and Pet food, cosmetic, pharmaceutical, medical and industrial.



Flexible Packaging



Laminating adhesives, Functional coatings and Primers

- Solvent Free laminating adhesives

Fast speed machine up to 600m/min – productivity improvement

Fast PAA decay

High-barrier laminates at 400 m/min

Retort and ovenable applications

- Solvent Based laminating adhesives

High performances adhesives for:

cold form, BoV, Deep-draw, retort pouch

epoxy-silane free adhesives

Compostable and recyclable

- Functional coatings

Primers, Heat Seals and Varnishes

Direct Food contact

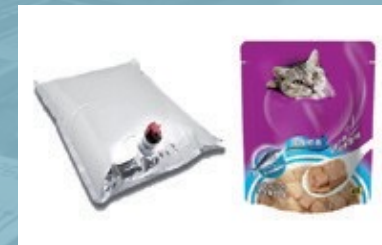
High thermal resistance

Flexible Packaging

✓ Functional coating and primers

Variety of coatings, primers and lacquers.

- Extrusion Primers
- Printing primers
- Adhesion promoters
- Functional coatings are used specially for gloss or matt packaging designs applied on paper, aluminium foil or plastic films, improving the visual appearance and protecting surface printed material.



Technical Lamination



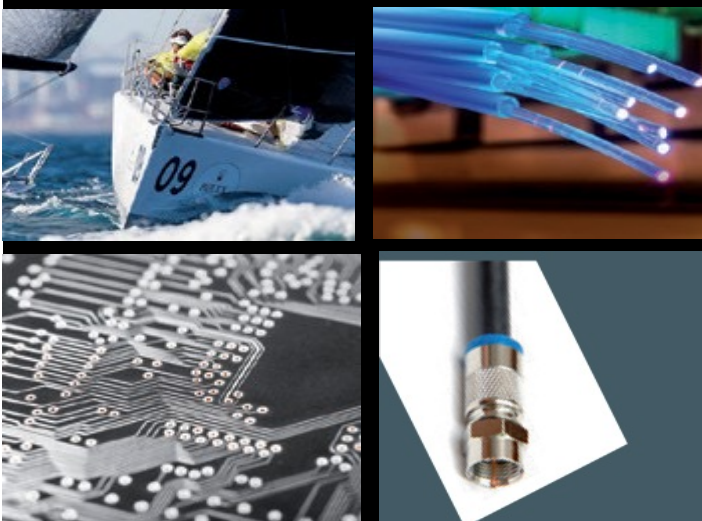
Adhesives for Photovoltaic Laminates

- Back-sheet & front side laminates must withstand and resist extreme conditions and UV radiation for at least 25 years



Adhesives for Electrical Laminates

- Wide range of laminates used in the electrical insulation industry
 - Cable wrapping
 - Flat cable & electrostatic shielding
 - Electrical insulation up to class H+
 - Morchem adhesives also used in: Production of flexible conductive wiring



Textile Lamination

✓ **Extensive product portfolio of polyurethane adhesives**

For all kinds of fabrics, including high-technology fibers such as fluorocarbon film (Teflon®)

Conventional application methods such as: slot nozzle, roller, screen or spray applications

Recommended for:

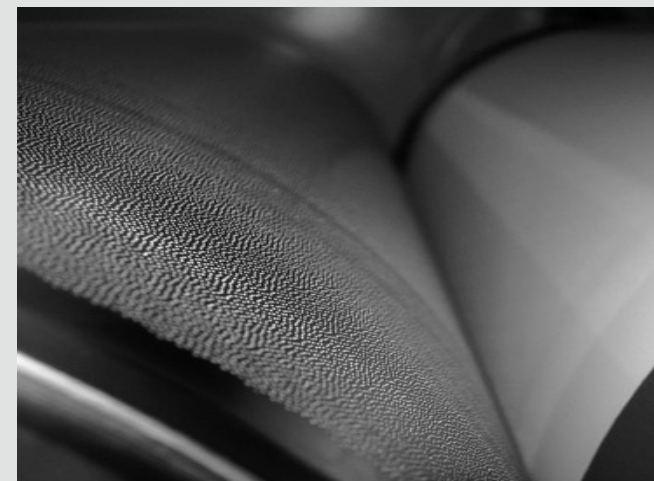
Automotive industry, medical textiles, protection & industrial wear, sportswear, upholstery, intimate apparel, etc.

✓ **Reactive Hot Melt (RHM) Adhesives for textile lamination:**

Higher-efficiency energy system
Non-flammable product
Application on demand – Very low waste production
Irreversible bonding

✓ **Solvent (Newbond) and Water based Adhesives**

Specifically developed for fabric and foam laminations
High tack performance and 'soft to touch' finish



Flat Lamination

- ✓ **Adhesives for Flat Lamination / Surface bonding technologies**
 - Wood decorative and functional panels, veneers, CPL and HPL for furniture & the building industry
- ✓ **MORCHEM Polyurethane Reactive Hot Melt Adhesives:**
 - High adhesion
 - High creep resistance
 - Excellent roller stability
 - Easy Processability
- ✓ **Offering security, fire protection and insulation to:**
 - Building furniture Interior & exterior walls
 - Roofs and floors for buildings Caravan & truck panels



TPU Ink Binders



Modifier PU binders

Thermoplastic modifier polyurethane resins used in combination with other raw materials in printing inks to replace phthalates and other restricted substances.



Film-forming PU binders

Morchem can offer semi-aliphatic and aliphatic systems that would allow

- Faster speed machine
- Enhance adhesion
- Retortable



Sustainability: Our Commitment



Novel Commercial Products:

- ✓ Working with **2 product lines**:
 - Recyclable adhesives
 - Compostable adhesives
- ✓ Both ensuring that our customers can offer **sustainable market solutions**



Recyclable



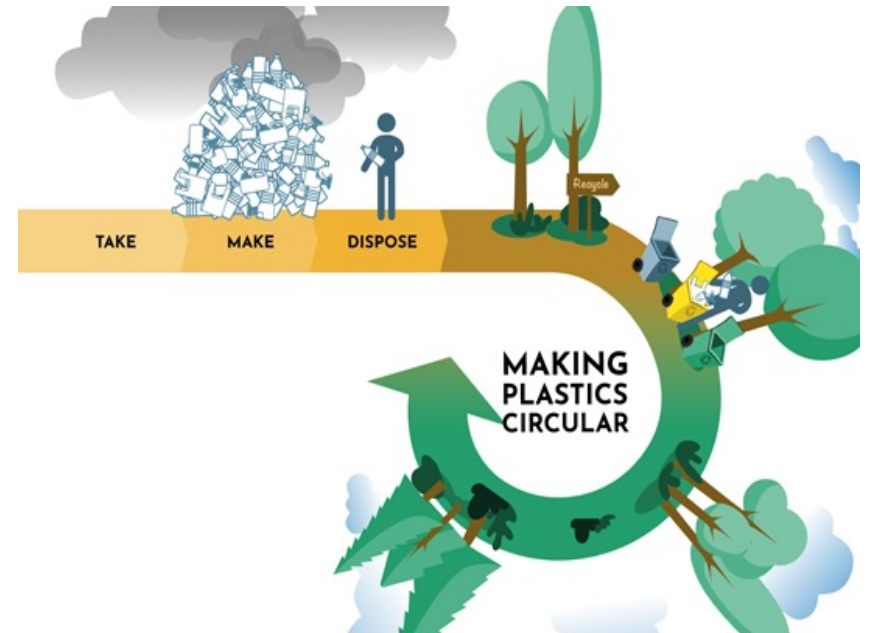
Compostable

Sustainability: Our Commitment



Raw Materials:

- ✓ More than 20% of raw materials used are from renewable sources.
- ✓ Near future → Increase percentage by including other raw materials that are currently based on oil chemistry but which already have renewable alternatives, albeit at a much higher cost.



Sustainability: Our Commitment



Sustainable Production Process:

With the **new plant** in Guadalajara, we have also **reduced the energy impact** on the manufacturing processes of our products.

- ✓ **Increased efficiency** of the energy input for heating and cooling of our processes.
- ✓ **Reduced water** usage / consumption
- ✓ **Waste reduction** in the process through most efficient separation technologies and bulk raw material handling



Always on the path towards entrepreneurial sustainability.

Morchem Added Value



Please
contact us:



■ EUROPE

MORCHEM GmbH

Gewerbehof Nord
Wilhelmine-Reichard-Str. 7
80935 München | Germany
Phone: +49 (0) 89 55 28 6900
info-centraleurope@morchem.com

■ SPAIN - LATAM

MORCHEM, S.A.

Alemania, 18-22 Pol. Ind. Pla de Llerona
08520 Les Franqueses del Vallés | Spain
Phone: +34 938 405 702 | Fax: +34 938 405 711
info@morchem.com

■ USA + CANADA

MORCHEM INC.

Suite 210 | 10411 Corporate Drive
Pleasant Prairie | County of Kenosha
WI 53158 | USA
Phone: +1 920 397 6097
info@morchem.com

■ ASIA PACIFIC

MORCHEM, S.A.

Alemania, 18-22 | Pol. Ind. Pla de Llerona
08520 Les Franqueses del Vallés | Spain
Phone: +34 938 405 702 | Fax: +34 938 405 711
info@morchem.com

■ INDIA

MORCHEM PRIVATE LIMITED

103 Janki Centre, Off Veera Desai Road
Andheri (West) | Mumbai-400053 | India
Phone: +91 22 49705624
info-india@morchem.com

■ MIDDLE EAST & AFRICA

MORCHEM FZE

Al-Jazeera Al-Hamra | Ras Al Khaimah
Dubai | United Arab Emirates
Phone: +34 93 840 5705
info@morchem.com

■ CHINA

MORCHEM SHANGHAI TRADING Co. LTD.

Xinhua Insurance Tower
Room B26, 3F | 558 DonDaMing Road
Hongkou District | 200080 Shanghai | China
Phone: +86 021 5198 7521
info-asia@morchem.com

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thanks for
your attention

