



Low- and No-MDI PU Foams:

The New Era of Foam Technology

We save energy / Wolf Group 

Our mission

Wolf Group is committed to improving people's quality of life by providing safe, energy-efficient and environmentally friendly construction solutions.

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Wolf Group

is a leading European manufacturer and distributor of construction chemistry products, including PU foams, sealants, adhesives, coatings, and systems.

For 30 years, our high-performance products have been used in various construction sectors such as window installation, facade weather sealing, finishing works, and much more. **Our products ensure a building's durability and efficiency** even in the most demanding environments.

Operating in over **70 international markets, with 5 production units in Estonia, Spain and France**, Wolf Group is equipped to meet complex requirements and has the capacity to produce thousands of formulations annually.

Our agile approach towards evolving market trends allows us to **service the needs of our customers quickly and efficiently**. We constantly develop new products adapted for different climate zones, building practices and regulations. In addition to **our 1,300 active formulations, we have more than 30 people in our R&D facilities in Gava (Spain) and Tallinn (Estonia)** working daily on developing new energy-efficient products with low VOC content and safer raw materials.

Annually, Wolf Group manufactures approximately **53 million products under its flagship brand, Penosil**, as well as for private label customers. PU foams play a significant role in our yearly production, with 27 million cans produced per year.

In addition to our main products, we also have in-house plastic production for accessories like PU foam adapters, caps, and patented tools such as the gun foam applicator and spray nozzle.

Technological advancements have transformed the way construction foams are made and used. **The rising popularity of Low Isocyanate Monomer (Low-MDI) and Isocyanate-Free (No-MDI) polyurethane (PU) foams reflects the construction industry's broader shift towards healthier, safer, and more environmentally friendly products.**

We want our customers to enjoy a better and safer living environment. To achieve this, our expert R&D teams in Spain and Estonia in collaboration with our suppliers, local universities and research institutions continuously develop new products with safer raw materials.



Wolf Group's

state-of-the-art PU foam factory in Gava, Spain, serves as the European **competence centre for Low- and No-MDI PU foam production**, positioning us at the forefront of Very Low MDI PU foam innovation. For example, our Very Low MDI spray foams, featuring a patented spray nozzle and high-performance formulations, stand as unique offerings in the European PU foam market.

We are proud to be **the first European manufacturer to offer a comprehensive range of Low- and No-MDI PU foams** to our customers. Our Low- and No-MDI PU foam portfolio includes spray foams, gun foams, and straw foams, all designed for both interior and exterior applications. These foams adhere well to a variety of building materials, such as wood, concrete, stone, plaster, metal, PVC, and polystyrene, and are available in a range of packaging sizes: 1000ml, 650ml, and 500ml foam cans.

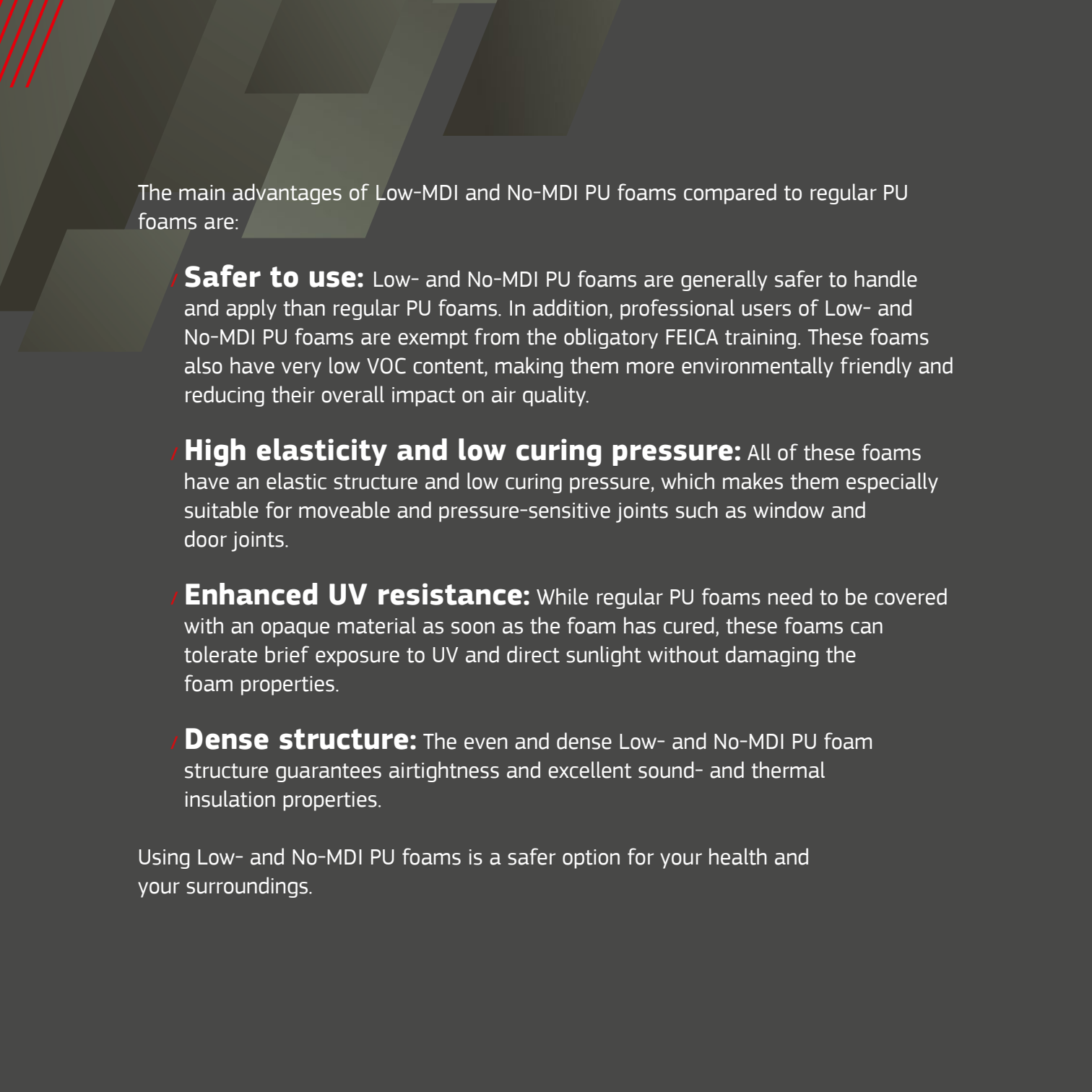
We will soon introduce a **new range of Low-MDI foams, featuring B2 gun foam, B2 spray foam, and foam adhesive**, therefore further advancing our commitment to innovation and product excellence.

The popularity of **new-generation products such as Low- and No-MDI PU foams** is due to their safer characteristics, as there is no need to use gloves or other protective equipment during application. However, we still advise using protective gear to prevent getting your hands dirty.

Moreover, **these products come with Environmental Product Declarations (EPDs) and are compliant with BREEAM and LEED green building standards certificates.**







The main advantages of Low-MDI and No-MDI PU foams compared to regular PU foams are:

- / **Safer to use:** Low- and No-MDI PU foams are generally safer to handle and apply than regular PU foams. In addition, professional users of Low- and No-MDI PU foams are exempt from the obligatory FEICA training. These foams also have very low VOC content, making them more environmentally friendly and reducing their overall impact on air quality.
- / **High elasticity and low curing pressure:** All of these foams have an elastic structure and low curing pressure, which makes them especially suitable for moveable and pressure-sensitive joints such as window and door joints.
- / **Enhanced UV resistance:** While regular PU foams need to be covered with an opaque material as soon as the foam has cured, these foams can tolerate brief exposure to UV and direct sunlight without damaging the foam properties.
- / **Dense structure:** The even and dense Low- and No-MDI PU foam structure guarantees airtightness and excellent sound- and thermal insulation properties.

Using Low- and No-MDI PU foams is a safer option for your health and your surroundings.

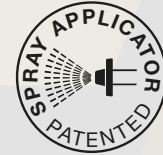
Very Low MDI spray foams



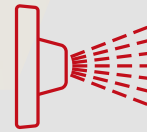
**EasySpray
Foam
111**



**Spray
Foam**



Spray Nozzle



Wolf Group's innovative and patented spray nozzle, made of flexible rubber, is compatible with most foam guns and attaches easily to the gun barrel.

The spray nozzle can be rotated between a vertical and horizontal position. Depending on the surface area to be covered, a broader spray trajectory may be preferable (horizontal position), or if a small area needs to be insulated, a vertical nozzle position should be used.

One-component sprayable Very Low MDI gun foam for sealing and insulating all types of inconvenient places, including uneven and round surfaces, where using traditional insulation materials is difficult.

- / Contains less than 0.1% diisocyanates
- / Quick and easy application with our spray nozzle
- / Elastic structure guarantees good movement capability
- / Thickness of the insulation layer is freely selectable. Wait at least 60 min before applying the next layer
- / Wolf Group's patented spray applicator compatible with most foam guns

Our spray foam's formula, together with the spray nozzle, helps create this foam's unique structure, which allows it to be used for a multitude of insulation works, such as:

- / Thermal- and sound-insulating lintels, doors, ceilings, pipes, attics, balconies, garages, cellars, containers, vehicles, vessels and other construction parts with the risk of thermal bridges
- / Insulating hard-to-reach surfaces and repairing the existing insulation layer
- / Reducing the impact of thermal bridges
- / Preventing condensation on cold surfaces

| | |
|-----------------------------|--|
| Air temperature during use: | +10°C to +30°C |
| Thermal insulation value: | $\lambda=0.033 \text{ W/(m}\cdot\text{K)}$ |
| Sound insulation value: | 62 dB |
| Post expansion: | 100% |
| Fully cured: | 24h |
| Product colour: | white |

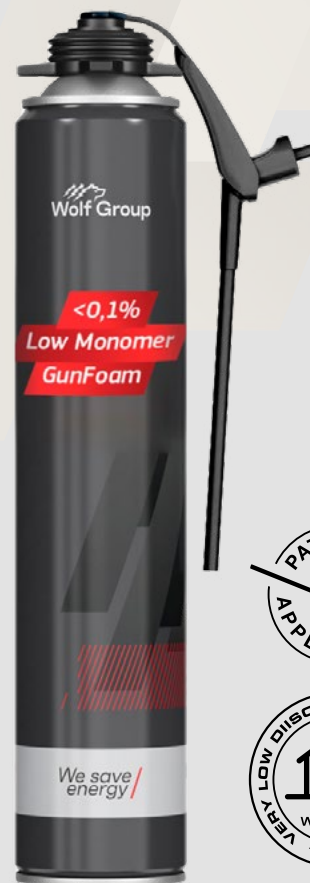
Very Low MDI gun foams with applicator



*Elastic
Foam
118*



*Low Monomer
Gunfoam
122*



*<0,1%
Low Monomer
GunFoam*



Elastic one-component gun foam with Very Low MDI content and a special foam applicator. Our patented foam applicator has been especially developed for filling narrow and deep joints that are hard to access with a foam gun or traditional straw applicator. This PU foam can be applied either with a foam gun or our special applicator, making it a more versatile product than traditional gun foams.

- / Low curing pressure, it only expands into the available space and will not warp or bend the sealed materials
- / Very low (<0.1%) diisocyanate content
- / Remains elastic, even when exposed to structural movements
- / Can be used with a foam gun or applicator
- / Dense and airtight structure
- / No need for additional moistening

Due to this foam's low expansion pressure, it is especially suited for fragile and pressure-sensitive construction works, such as:

- / Installing and sealing windows and doors
- / Filling and insulating narrow and deep penetrations, cracks and gaps
- / Sealing between insulation boards

| | |
|-----------------------------|--|
| Air temperature during use: | +5°C to +30°C |
| Thermal insulation value: | $\lambda=0.034 \text{ W/(m}\cdot\text{K)}$ |
| Sound insulation value: | 62 dB |
| Post expansion: | <80% |
| Fully cured: | <48h |
| Movement capability: | $\pm 25\%$ |
| Product colour: | white |

Very Low MDI gun foams



*Gasket Foam
103*



Gasket Foam



Elastic one-component insulation gun foam with Very Low MDI content for sealing between timber frame and drywall.

- / Low curing pressure, it only expands into the available space and will not warp or bend the sealed materials
- / Provides airtight sealing
- / Long-lasting elasticity and very good movement capability
- / Very low (<0.1%) diisocyanate content
- / Excellent insulation properties

This product has been specifically developed for insulating and sealing between building's timber frame and drywall.

Air temperature during use: +5°C to +40°C

Post expansion: 80%

Fully cured: <24h

Product colour: white

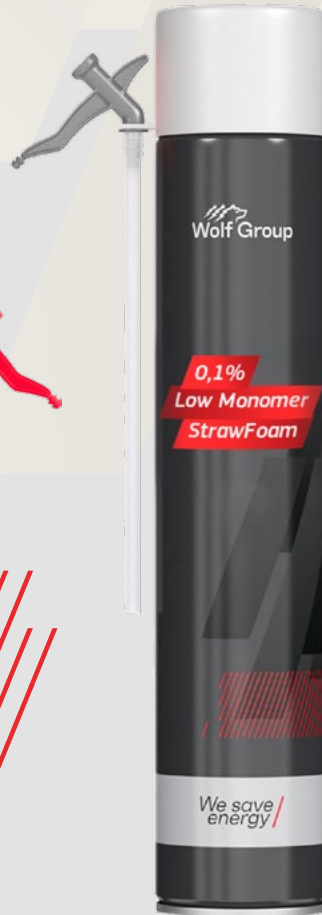
Very Low MDI straw foams



**Low Monomer
Strawfoam
283**



**White
Filling Foam
267**



**0,1%
Low Monomer
StrawFoam**



Multipurpose one-component straw foam with Very Low MDI content for various filling and insulating works.

- / Elastic texture gives it a very good movement capability
- / Very low (<0.1%) diisocyanate content
- / Low curing pressure
- / Dense and flexible texture
- / No need for additional moistening
- / Comes with a straw applicator, no need to spend additional money on a foam gun

Compared to gun foams, straw foams have higher post expansion, which makes them more effective for larger filling works, such as:

- / Filling and insulating cracks, gaps and larger holes
- / Sealing ventilation devices, cable and pipe penetrations

However, this foam's elastic and dense texture also makes it suitable for sealing window and door joints.

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|-----------------------------|--|
| Air temperature during use: | +5°C to +30°C |
| Thermal insulation value: | $\lambda=0.034 \text{ W/(m}\cdot\text{K)}$ |
| Sound insulation value: | 62 dB |
| Post expansion: | <110% |
| Fully cured: | <48h |
| Product colour: | white |

MDI-Free gun foams



*All Purpose
Gunfoam MDI Free
127*



*STP
Gun Foam*



Multipurpose one-component MDI-Free gun foam for various sealing and filling works. This product contains 0% free isocyanate monomers and is therefore a much safer choice for users than regular PU foams.

- / Totally diisocyanate, TCCP & VTMO free
- / High elasticity, absorbs structural movements
- / Very low curing pressure and post expansion, lower post expansion allows for more precise dosing
- / Excellent insulation properties
- / Excellent thermal- and sound-insulation values

This MDI-Free gun foam with high elasticity, very low curing pressure and post expansion is especially suited for fragile and pressure-sensitive construction works, such as:

- / Installing and sealing windows and doors
- / Filling and insulating penetrations, cracks and gaps
- / Sealing connecting joints
- / Sealing between construction boards

| | |
|-----------------------------|--|
| Air temperature during use: | +5°C to +30°C |
| Thermal insulation value: | $\lambda=0.033 \text{ W/(m}\cdot\text{K)}$ |
| Sound insulation value: | 62 dB |
| Post expansion: | <30% |
| Movement capability: | $\pm 20\%$ |
| Fully cured: | <48h |
| Product colour: | light yellow |

MDI-Free straw foams



**Strawfoam
MDI Free
242**



**STP
Straw Foam**



Multipurpose one-component MDI-Free straw foam for various sealing and filling works. This product contains 0% free isocyanate monomers and is therefore a much safer choice for users than regular PU foams.

- / Totally diisocyanate, TCCP & VTMO free
- / Very low curing pressure
- / Excellent movement capability
- / Provides airtight sealing
- / Excellent thermal- and sound-insulation values

This MDI-Free straw foam is an excellent choice for various filling works around the construction site, such as:

- / Filling and insulating cracks, gaps and larger holes
- / Sealing ventilation devices, cable and pipe penetrations
- / Sealing connecting joints
- / Sealing between construction boards

| | |
|-----------------------------|--|
| Air temperature during use: | +5°C to +30°C |
| Thermal insulation value: | $\lambda=0.033 \text{ W/(m}\cdot\text{K)}$ |
| Sound insulation value: | 62 dB |
| Post expansion: | <100% |
| Movement capability: | ±20% |
| Fully cured: | <48h |
| Product colour: | light yellow |



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penosil.com