

ERGOFLEX

Product description

ERGOFLEX is a ready-to-use coating based on thermoplastic polyurethane (TPU), designed for surface finishing of flexible or rigid materials.

Its solvent-based formulation ensures effective penetration into porous substrates and, after solvent evaporation, forms a flexible, water-resistant skin with a smooth, matte, and uniform finish.

Ready to spray and tintable, it is ideal for protecting, finishing, or decorating flexible foams. The final finish can be adjusted depending on the spraying technique used.

- Smooth, mat finish,
- Limited odor,
- Waterproof and flexible,
- Non-CMR (non-carcinogenic, non-mutagenic, non-reprotoxic),
- Short drying time: 1 hour,
- Non-tacky after 5 minutes,
- Easy to apply,
- Low material consumption for an excellent finish,
- A small amount is sufficient to achieve an excellent finish (as a guideline: 1 L/m²),
- Good mechanical properties (elasticity, tear resistance),
- Slight shrinkage to help mask surface imperfections.

Applications

- **Orthopedics devices:** for coating, waterproofing and finishing seat-braces, mattresses, and AK/BK cosmetic covers,
- **Ergonomic and Medical Furniture:** premium esthetic covering, foam coating for seats and armrests,
- **Automotive / Transportation:** covering of technical foams,
- **Sports and Leisure:** decorative coating for soft protective gear,
- **Industrial Design / Packaging Industry:** visual and tactile uniformity of foam components.



Technical characteristics :

Chemical base : Polyurethane
Basic color : White opaque
Dry extract : 14 à 18 %
Density : 0.84
Viscosity : 170 mPa.s
Basic smell : Acetone
Drying time : 1 h

Compatible substrates

ERGOFLEX coating is particularly suitable for porous and solvent-resistant substrates, allowing for strong mechanical adhesion of the film.

- **Compatible:** open-cell flexible polyurethane (PU) foams (main application), uncoated technical textiles (polyester, polyamide), impregnatable fibrous substrates, paper, wood, leather.
- **Conditional (preliminary testing required):** technical foams other than PU if open porosity and solvent resistance are present; compact polymer substrates only if micro-porosity exists.
- **Not compatible:** polymers with low surface energy / non-porous (PE, PP, PTFE); silicones; substrates sensitive to ketones (PS, PMMA, PC); smooth metals or sealed varnished surfaces.

Compatibility with non-porous polymer substrates depends on their chemical nature, surface condition, and solvent resistance.

Application Method

ERGOFLEX is supplied as an opaque, highly fluid, ready-to-use liquid. It can be applied:

- By spraying, using a paint gun, for coating and finishing foam surfaces or porous substrates.
- As an in-mold coating, applied with a brush or using a fill-and-drain process, to create a smooth, resistant skin on low- to medium-density flexible polyurethane (PU) foams.

In this second case, ERGOFLEX is used pure or diluted with acetone and applied evenly to all mold surfaces. After solvent evaporation and formation of a continuous, dry-to-touch film, PU foam is poured directly into the mold. During foaming, the ERGOFLEX film bonds intimately with the foam, forming a strong, perfectly adherent skin without delamination.

The coating can be tinted by adding our paste colorants (white, black, green, blue, yellow, red, light flesh, or dark flesh), up to a maximum of 2% by weight.

The final drying time of the film is approximately 1 hour, depending on the applied thickness, temperature and ventilation.

Material processing

1. Weigh the amount of colorant to be added to the coating, ensuring it does not exceed 2% by weight (for example, 10 g for 500 g of coating).
2. Mix the coating and the colorant until a homogeneous blend is obtained, avoiding the use of electric mixers: the coating is solvent-based and therefore flammable. The product is ready to use. This mixture can be stored for several days if kept sealed, protected from moisture, and in bulk.
3. Apply the first coat close to the surface (about 10 cm) to impregnate the foam (if open-cell) and ensure mechanical adhesion between the coating and the substrate. This first coat does not need to have a perfectly uniform finish.
4. Then position the spray gun at 25-30 cm and apply cross passes, using a controlled motion at a constant speed for an even and homogeneous distribution. The interlacing of the spray lines ensures full coverage of the foam and closes the film to create an elastic, resistant, and waterproof skin.
5. Additional coats may be applied to increase film thickness and durability, but doing so will reduce elasticity.
6. Allow to dry for at least 1 hour to achieve optimal mechanical properties.

Handling and safety

ERGOFLEX coating contains active polymers that are carried by solvents that evaporate very quickly. Solvents' vapors present a double risk: they are highly flammable and more or less harmful to inhale. Use the product away from any flame or source of ignition (especially do not use hot air guns to accelerate the evaporation of the solvent).

Work in well ventilated rooms, in order not to breathe vapors that appear at room temperature and use extraction, systems suitable for flammable products next to the spray stations. In addition, use protective gloves, safety glasses and appropriate masks. Safety information is provided on the containers and in the Safety Data Sheets (SDS).

Storage and packaging

ERGOFLEX coating is guaranteed for 18 months if stored between 18°C and 25°C in hermetic container, away from moisture and light. Taps are available for purchase for larger packaging.

References

NAMES	PACKAGING	REFERENCES
ERGOFLEX COATING	1 L	EFX R01
	5 L	EFX R05
	25 L	EFX R25
	57 L	EFX R57
TAP FOR 30 L CAN	per unit	ROB 004
TAP FOR 60 L AND 200 L DRUMS	per unit	ROB 001

Application Equipment:

NAMES	PACKAGING	REFERENCES
SPRAY GUN TREND HD W/ 600ml GRAVITY FEED PAINT CUP	per unit	PIS E01
600 ml GRAVITY FEED PAINT CUP	per unit	GOD 004

Coloring agent:

NAMES	PACKAGING	REFERENCES
COLORING AGENT FOR PU AND ACRYLICS BLACK	250 g	CPU N01
COLORING AGENT FOR PU AND ACRYLICS BLUE	250 g	CPU B01
COLORING AGENT FOR PU AND ACRYLICS DARK FLESH	250 g	CPU CF1
COLORING AGENT FOR PU AND ACRYLICS FLESH	250 g	CPU C01
COLORING AGENT FOR PU AND ACRYLICS GREEN	250 g	CPU V01
COLORING AGENT FOR PU AND ACRYLICS RED	250 g	CPU R01
COLORING AGENT FOR PU AND ACRYLICS YELLOW	250 g	CPU J01
COLORING AGENT FOR PU AND ACRYLICS WHITE	250 g	CPU BL1

Custom's code

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