PELLE 3D
3D Leather

PELLE3D

Technical innovation
for the high craftsmanship
and leather industry

DESIGN INDEX ADI

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Pelle 3D key point

Applied to the Automotive, Leather, Footwear and Furniture sectors, the thermoforming process allows to obtain:

1. Higher quality of the products, both in terms of performance and in terms of perceived quality.

2. Repeatability of the result, reducing the impact of non-controllable variables:
   - Elasticity and softness of the leather.
   - Operator experience level.
   - Complexity of geometry to be achieved.

3. Performance stability over time, without alteration of the raw material and improving its plastic and aesthetic properties.

4. Production efficiency, with reduction of processing costs up to 70%.

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Sharp edges and high stress surfaces, without changing the grain

Undercuts, impossible to make with other techniques

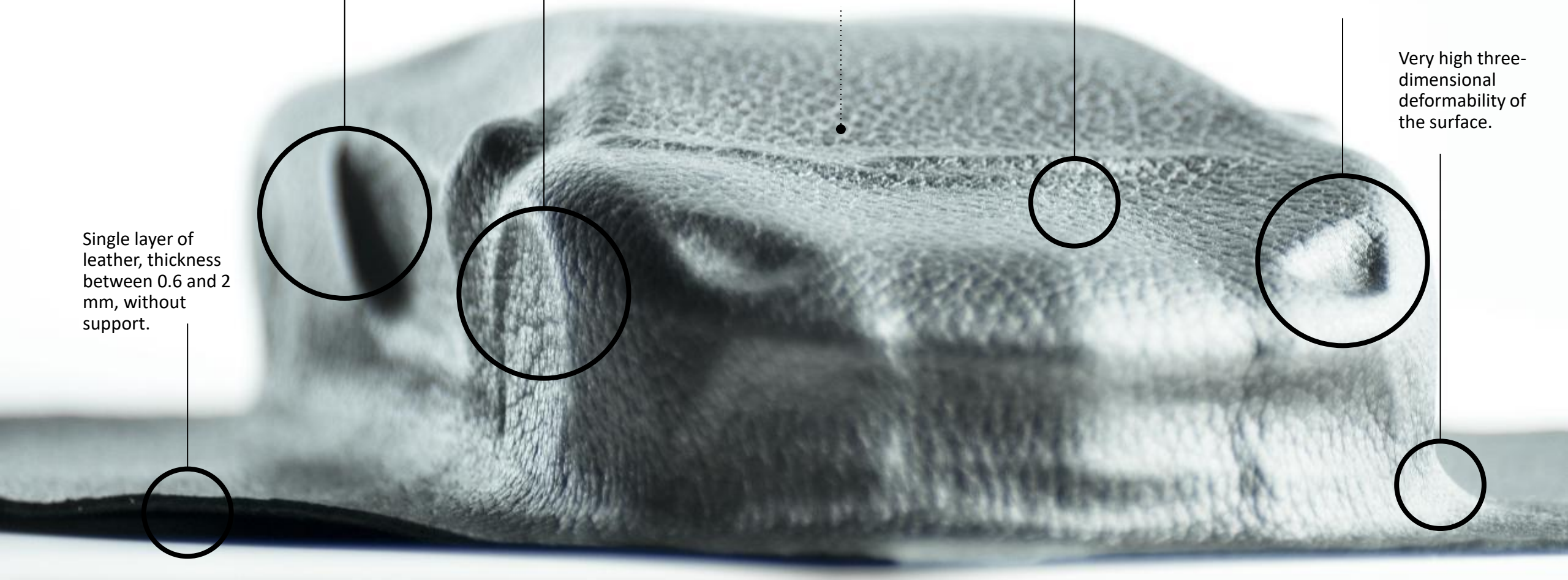
Internal hollow and without support: the suitably treated material becomes self-supporting.

The grain of the leather remains unchanged and preserves the visual and tactile qualities.

Very high level of detail, even on details smaller than one centimeter.

Very high three-dimensional deformability of the surface.

Single layer of leather, thickness between 0.6 and 2 mm, without support.



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Phase 1:
Additive application on the leather part

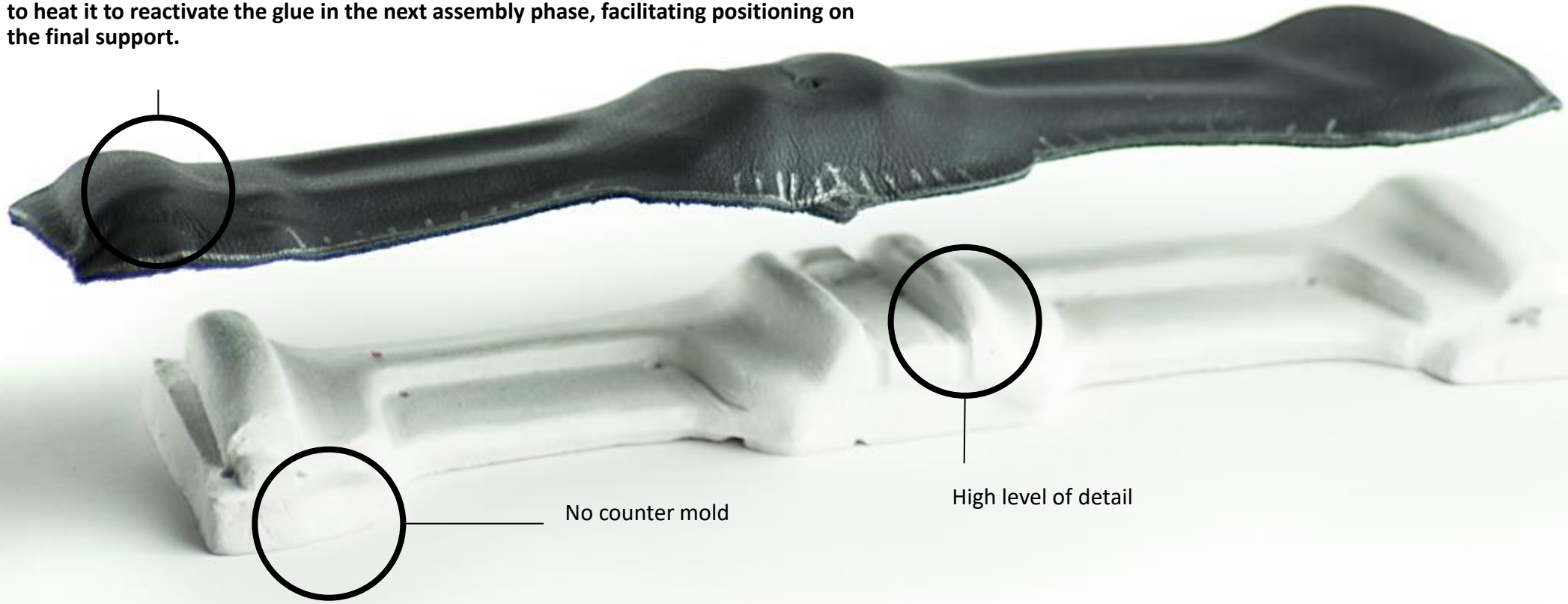
Phase 2:
Application of the leather on the mold

Phase 3:
Vacuum thermoforming

Phase 3:
Unpacking and packing. The material can already be glued and stabilized before thermoforming.

>35%
Time saving

The semi-finished product retains its impression in a structural way. It will be sufficient to heat it to reactivate the glue in the next assembly phase, facilitating positioning on the final support.



The Pelle3D Thermoforming process allows the leather to be formed by shaping it on a three-dimensional geometric shape by exerting pressure and heat over the entire surface of the material, suitably treated before deformation with a specific product.

The Pelle3D Thermoforming process can be applied to most of

- **Animal leather:**
  - bovine, ovine, caprine
- tanned in different process of tanning:
  - WetBlue, WetWhite, WetGreen, Vegetable
- with any kind of printing:
  - Natural, Hair-cell, exotic, various grains
- **Fabrics of natural fibres:**
  - Cotton, linen, canvas…
- natural fabrics with light coating
- Mixed woven fabrics (natural > 60%)
- **Synthetic fabrics:**
  - Microfiber
  - Nylon
  - PU
  - …

The Pelle3D Thermoforming process shapes the leather on a “male mold” of the three-dimensional shape that you want to achieve without using a counter-mold or female mold so as not to modify the flower side of the material. In this way the original aesthetics of the material is preserved intact.

The process takes place at a temperature of about 40-50°C (105-120° F) so as not to modify the characteristics of softness and naturalness of the leather.

In this way, the three-dimensional leather shaped remain soft and deformable like the original material and with the same characteristics of the part that is NOT thermoformed.

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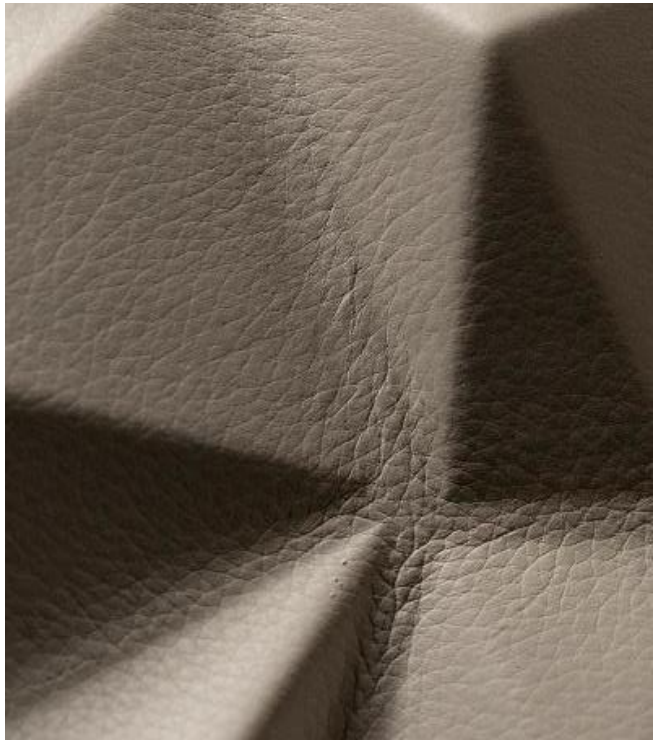
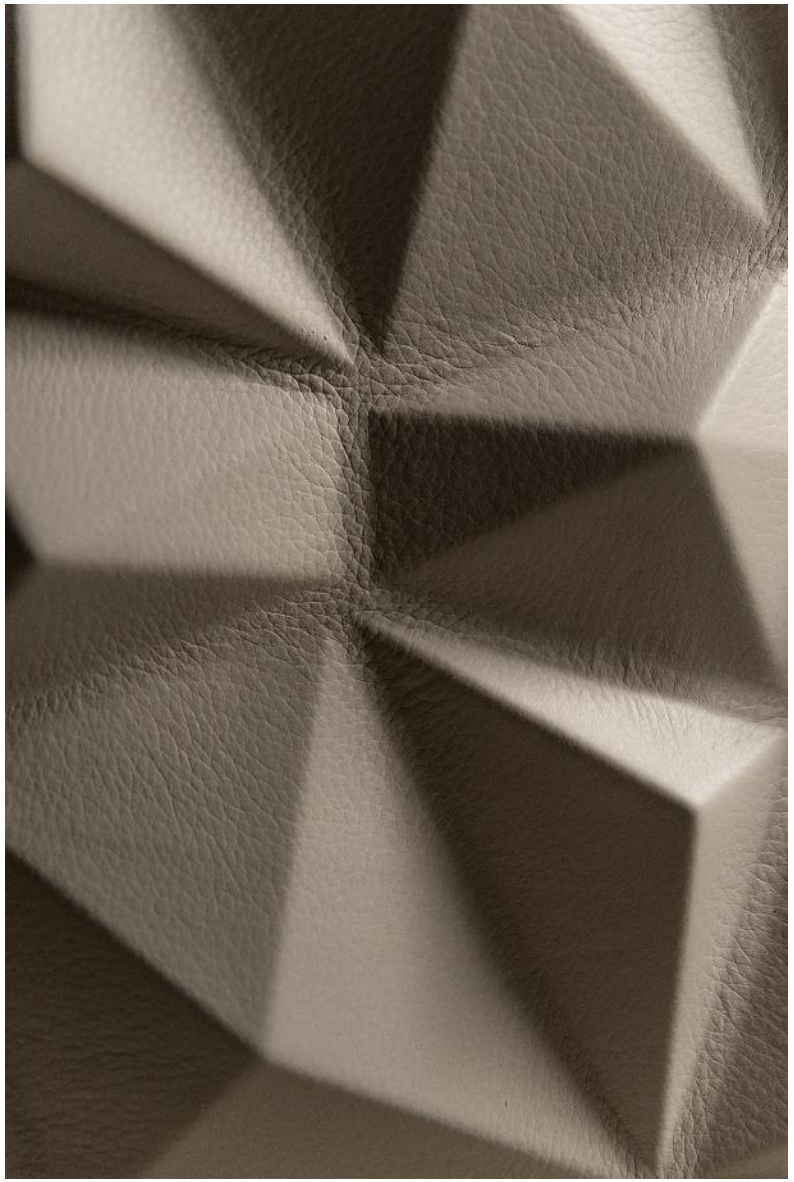
Interiors decoration





Shoes industry

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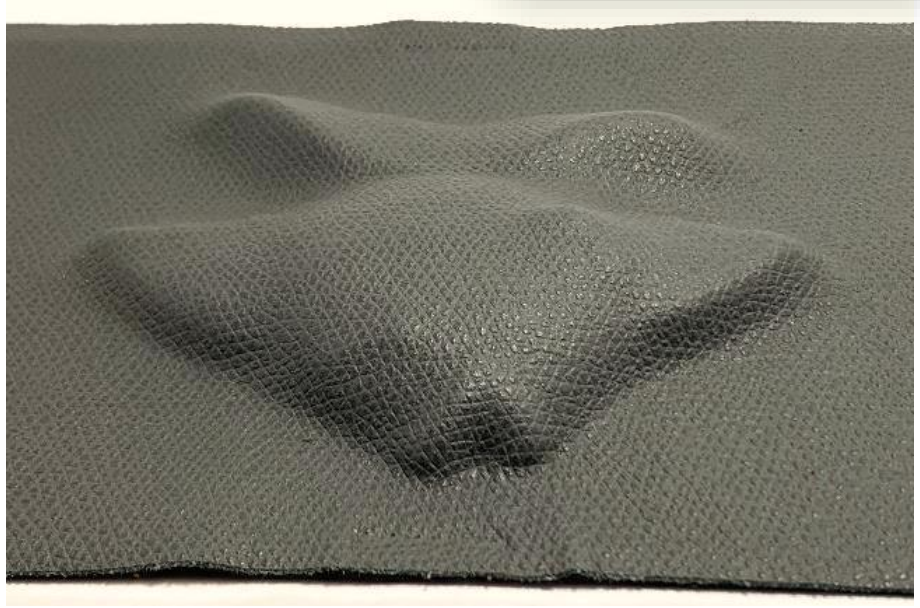
Some examples of applications:

Application on:

Nappaleather with metallic finishing

Some examples of applications:

Application on: Split leather
printed / embossed and finished



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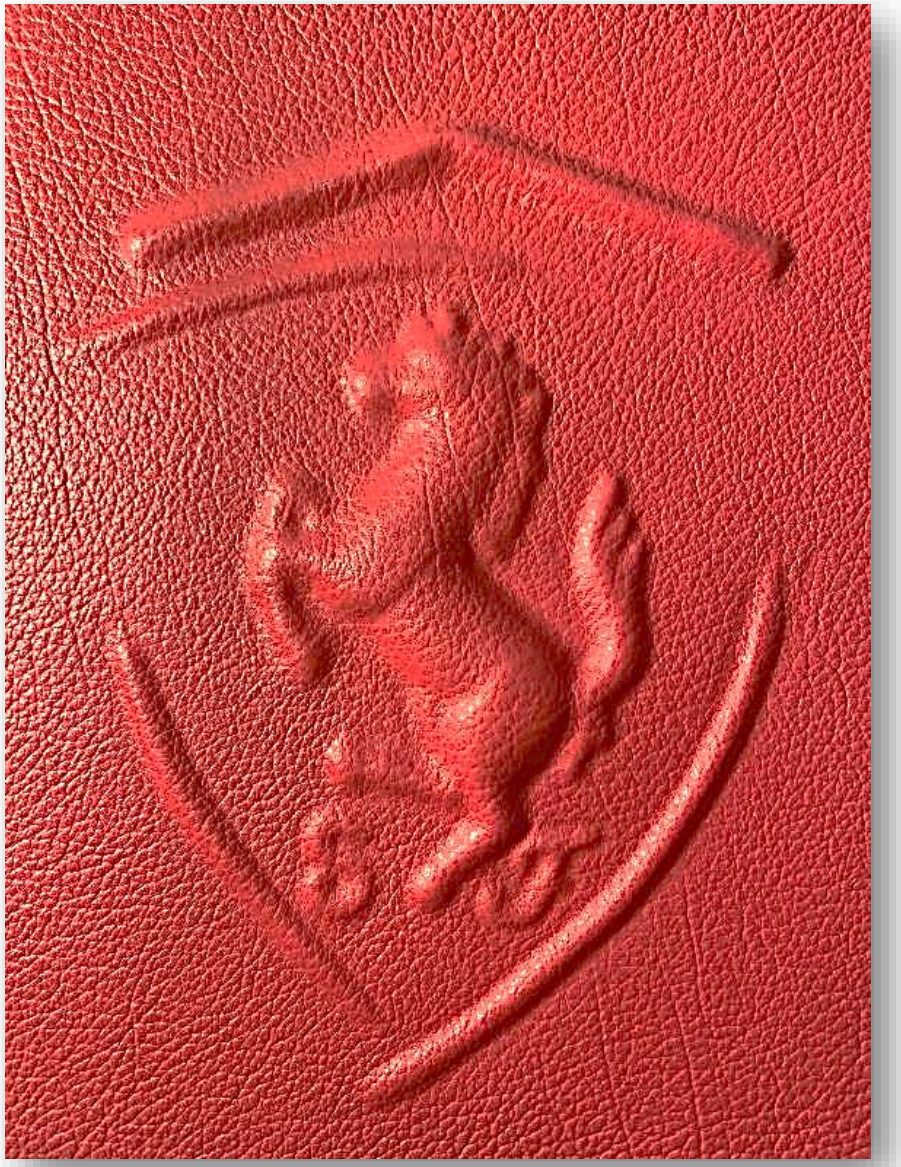
Some examples of applications:

Application on:
Bovine Leather with natural grain



Some examples of applications:

Application on:

Kidskin vegetable re-tanning

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Some examples of applications:

From Sketches to Prototypes

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Some examples of applications:

Deep thermoforming for
suitcase shells,
trolley, case, bags ...

Cuoietto leather 1.8 mm tickness

Lamborghini Aventador 1:24 scale in

Automotive Wet-Blue Leather

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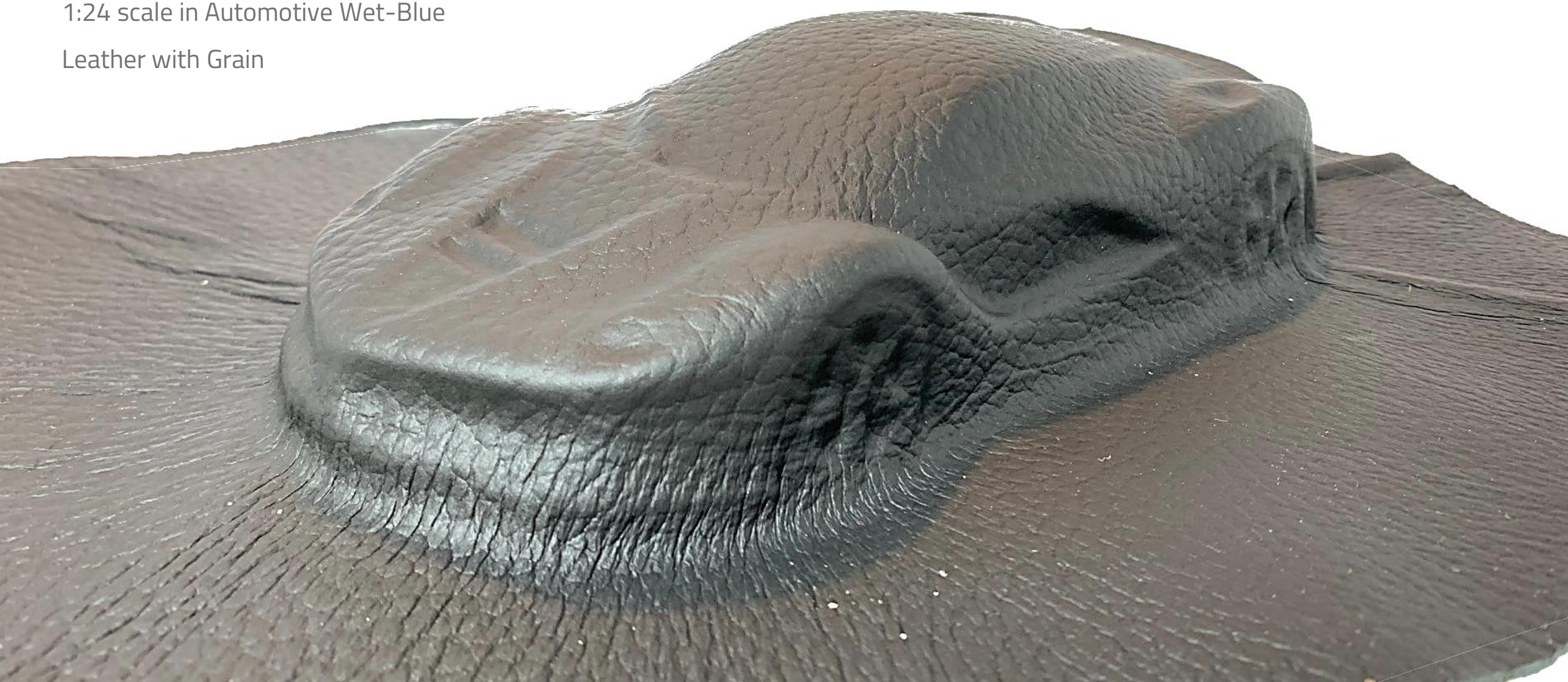
Ferrari «LaFerrari»

1:24 scale in Automotive Wet-Blue

Leather with Grain



Lamborghini Aventador 1:24 scale in Wet-Blue Leather

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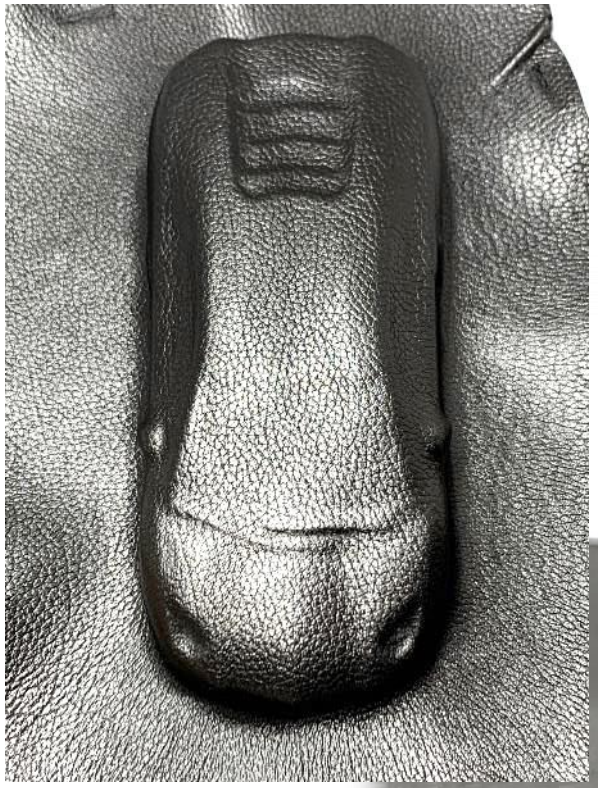

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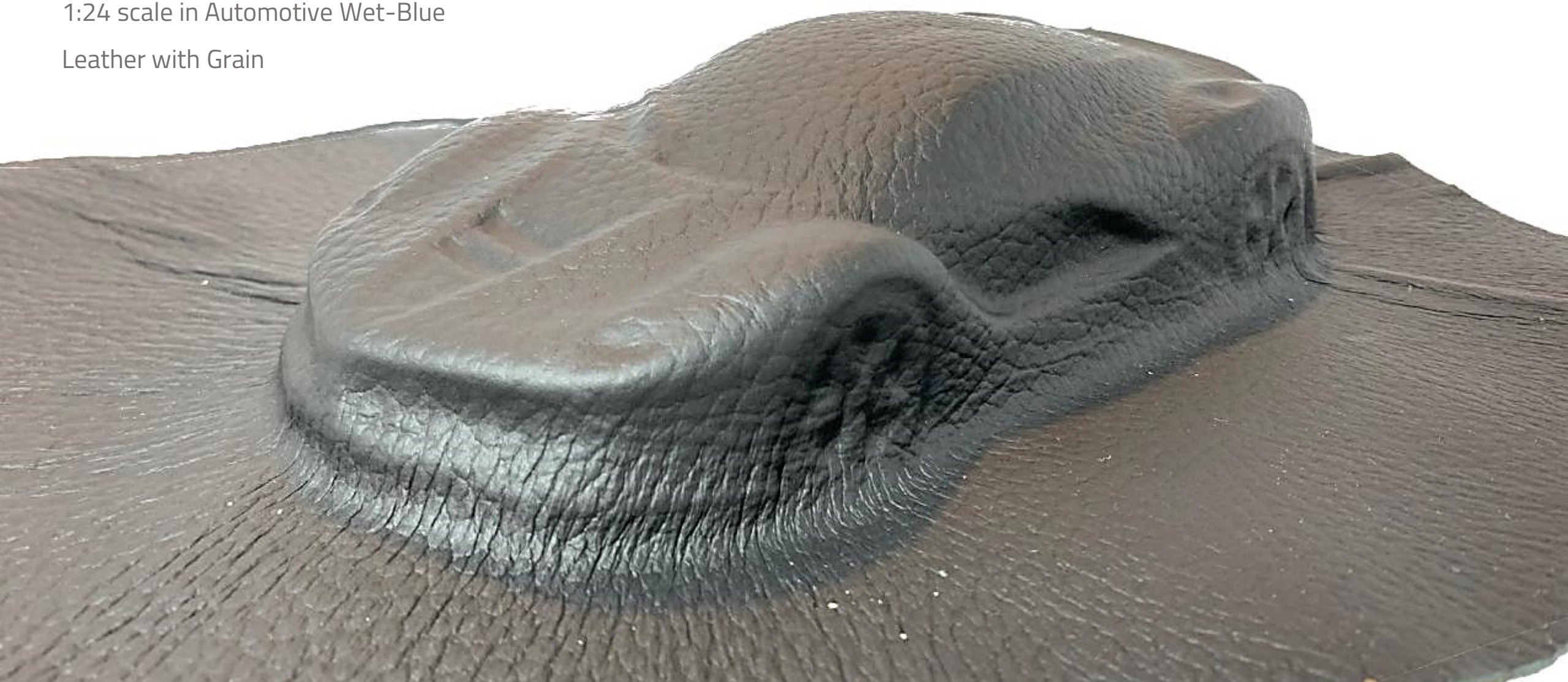
Ferrari «LaFerrari»

1:24 scale in Automotive Wet-Blue

Leather with Grain



Rho FieraMilano September 2024

automotive interiors EXPO EUROPE

Stuttgart Messe November 2024

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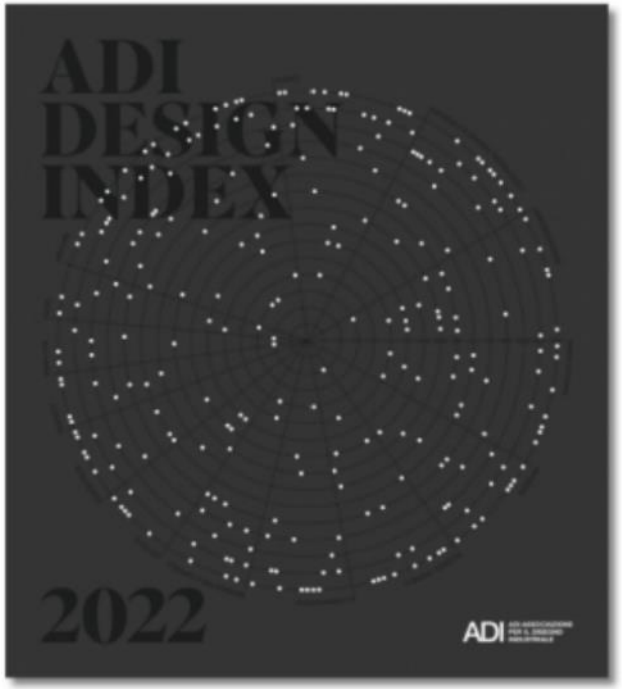
ADI ASSOCIAZIONE PER IL DISEGNO INDUSTRIALE

DESIGN INDEX ADI



P³ PELLE3D

Un innovativo processo di lavorazione della pelle in grado di imprimere una geometria stabile nelle tre dimensioni, migliorando la qualità dei manufatti con una riduzione dei tempi di lavorazione del 35%. Pelle 3D consente nuovi sviluppi formali nel design di interni, mobilità, moda e accessori.

Azienda: EGAS CONSULTING
Prodotto: Pelle3D
Designer: Corrado Luigi Cingolani

www.pelle3d.com

An innovative leather manufacturing process which makes it possible to impress a permanent 3D geometry, improving the quality of semi-crafted products and reducing manual processing times by over 35%. Pelle 3D improves design innovations in the automotive, fashion and interior sectors.

Company: EGAS CONSULTING
Product: Pelle3D
Designer: Corrado Luigi Cingolani

www.pelle3d.com

Thank you.

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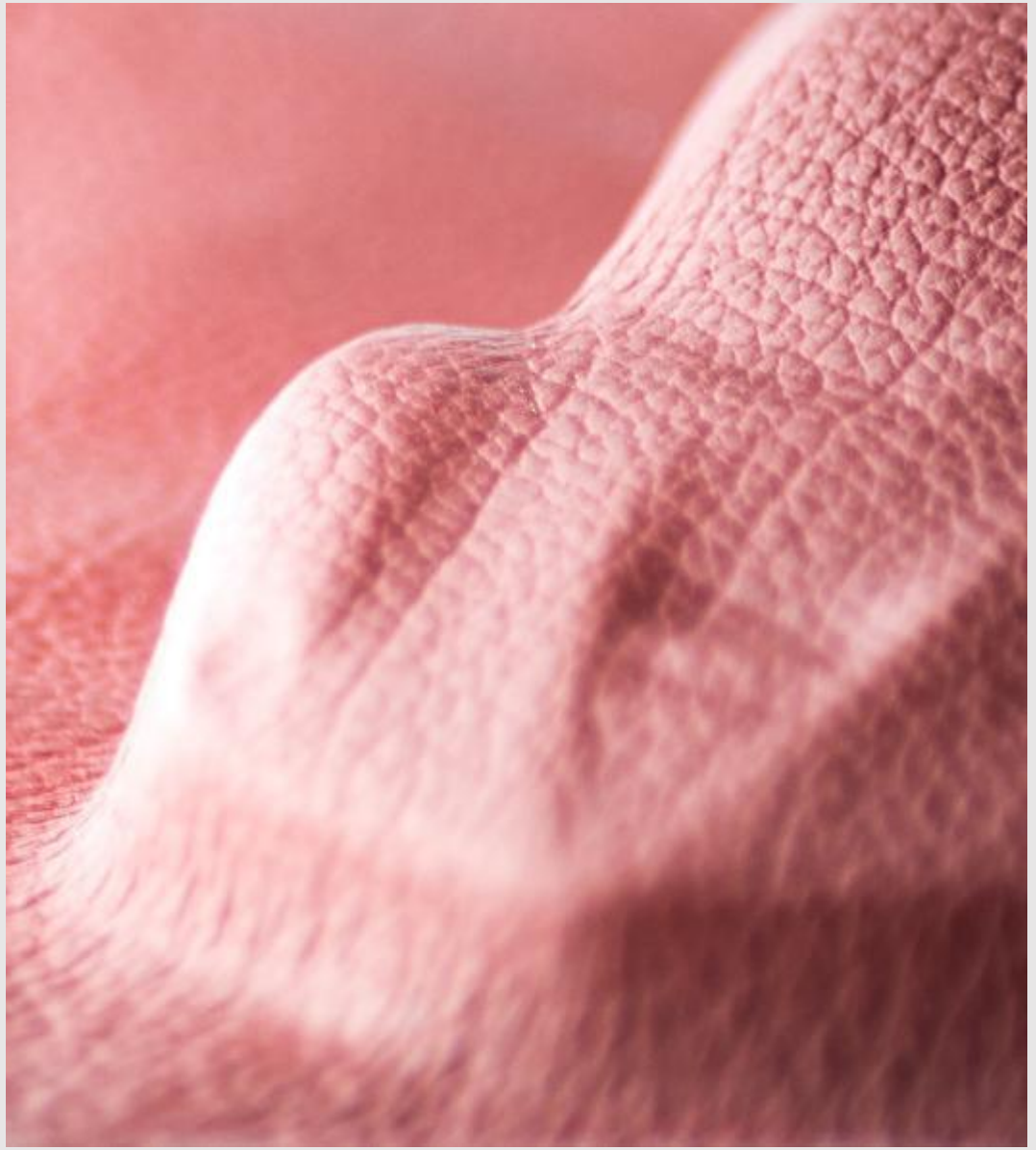
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