

UMO

soft

summary

This documentation provides insight into the design process of the „3 Dimensional Design“ course during the winter semester 2024/25. The project was a collaborative effort by Romy Hirschle and Maria Merino Zapata, supervised by Jessica Bulling.

Throughout the project, we explored form, color, and materials in depth. This documentation presents our tests, experiments, and overall learning progress.

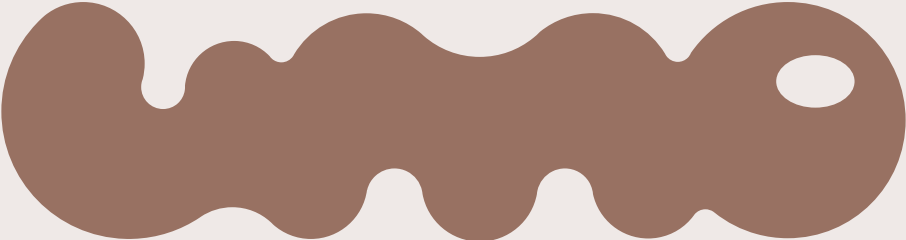
Thank you!

Wintersemester 2024/25
3 Dimensional Design
Produkt Design 3

This project was supervised by Jessica Bulling

H f G

**Hochschule für Gestaltung
Schwäbisch Gmünd**



soft

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TOPIC

semantic effect of a lamp

The task is to design a table lamp based on a selected adjective, considering its semantic impact on the observer.

Through this assignment, students develop a deep understanding of the semantic effects of form, color, and material combinations. They select an adjective (e.g., elegant, light, or sporty) from a predefined word pool, analyze its meaning using mind maps, discuss their findings, and refine their insights through mood boards.

Based on this analysis, students design a table lamp that clearly conveys the chosen adjective through its form, color, and materiality. The accompanying documentation of the design process serves as an additional exercise for reflection and comprehension of design decisions.



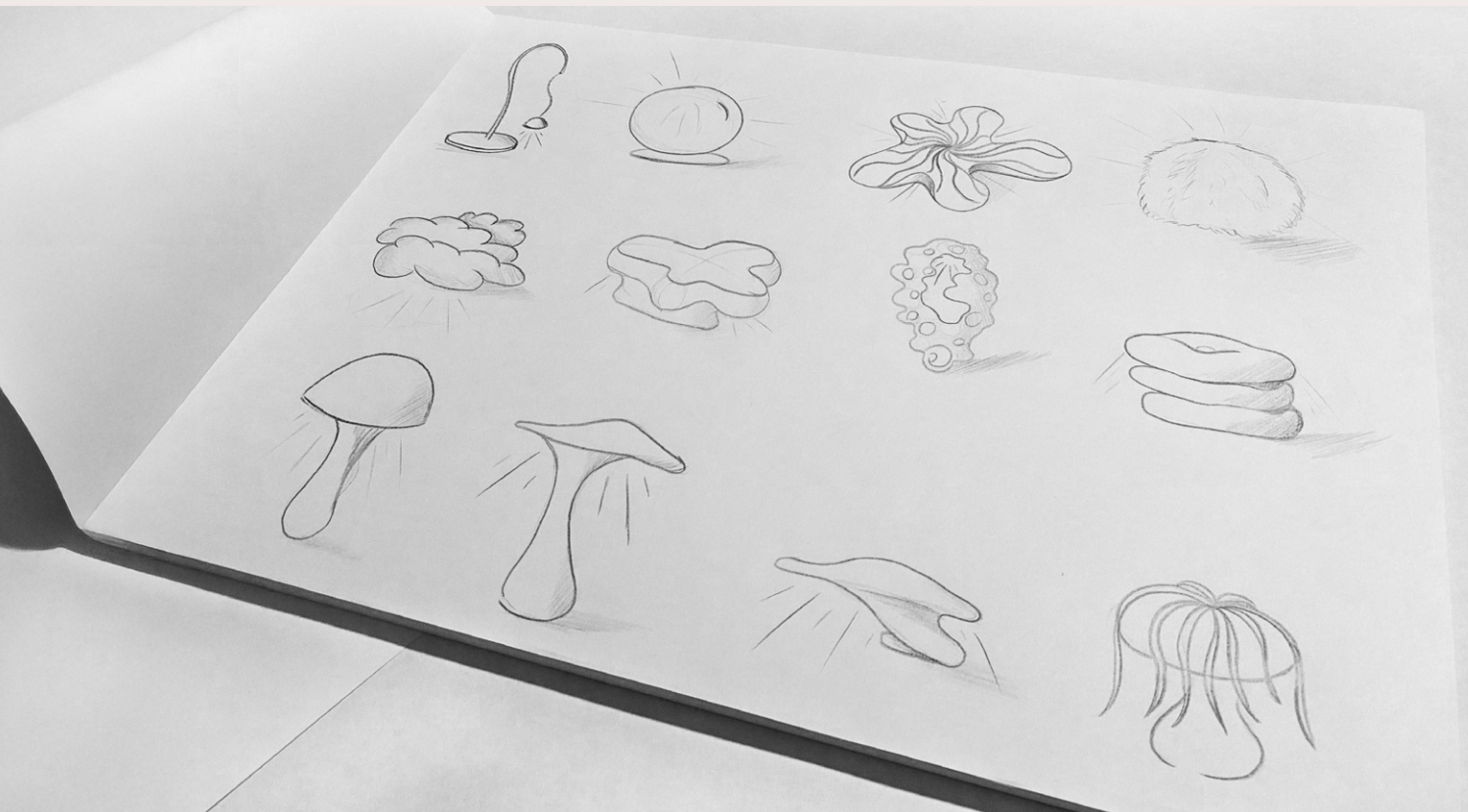
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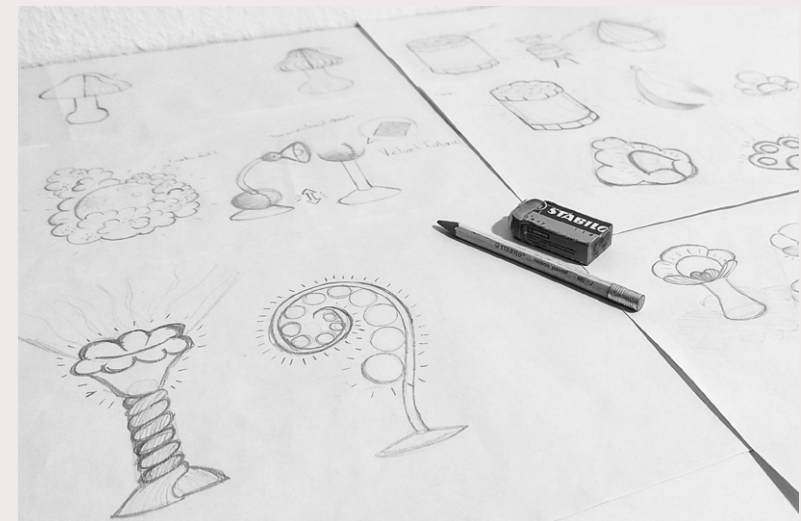
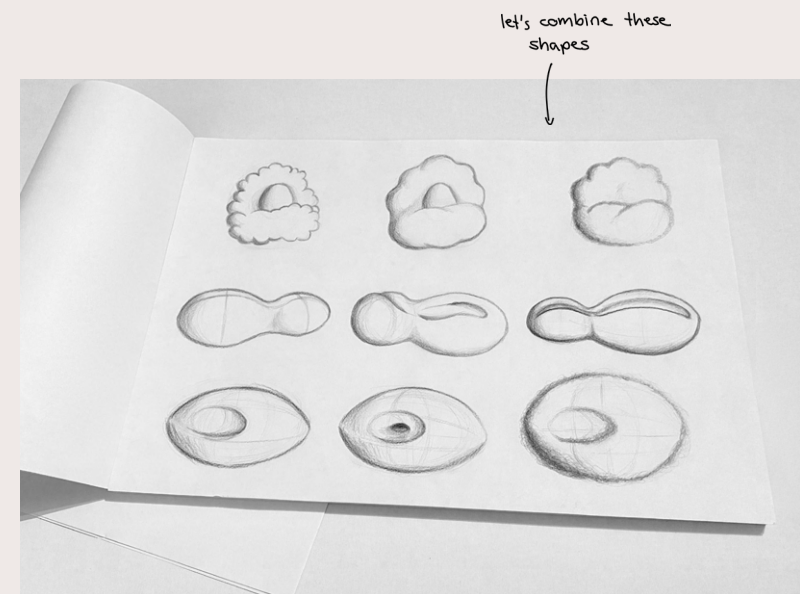
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SKETCHING

ideation



We used pencil and Polychromos to put our ideas on paper. Starting with a mushroom cap and a peanut-like form, we combined them into a new design. To represent different materials, we experimented with shading techniques and line weights. In the beginning, we took inspiration from organic forms like mushrooms, clouds, and plush toys. Over time, we moved away from these natural references, refining and abstracting our shapes to develop a more unique design language.

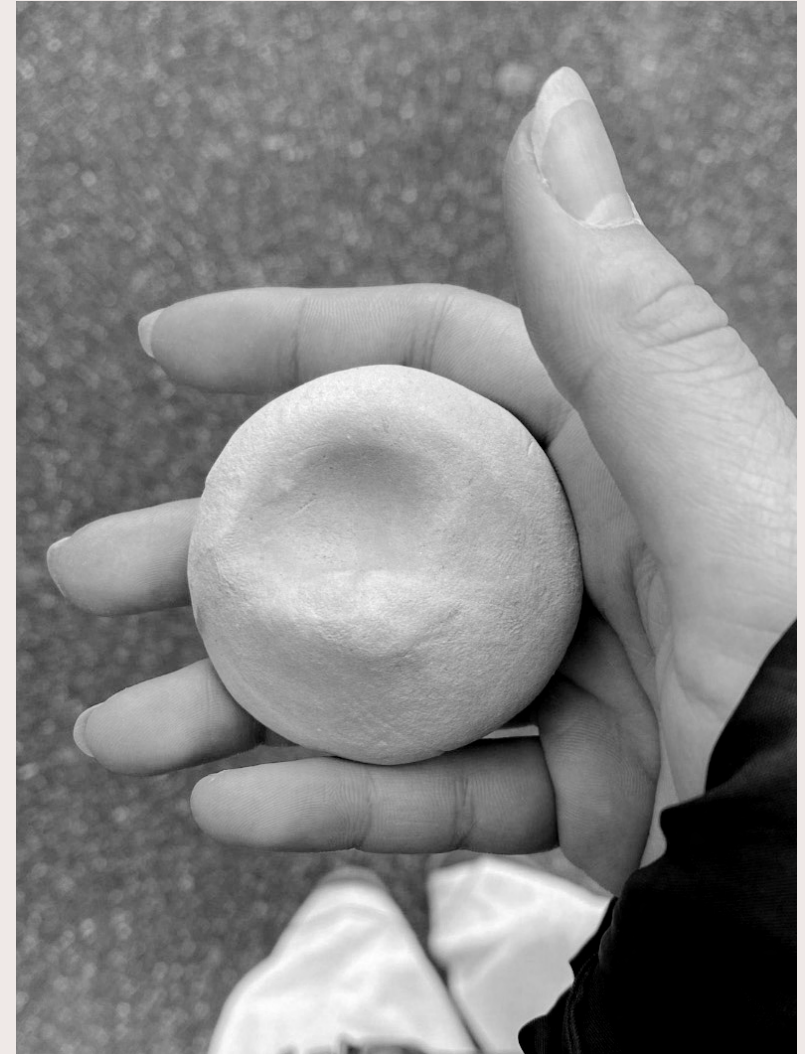


MODELING

materials and process

To transform our sketches into physical models, we used materials such as air-drying clay, paper, cotton, sponges, and extruded polystyrene (XPS).

We also started exploring different color concepts. These results were presented at the midterm presentation.





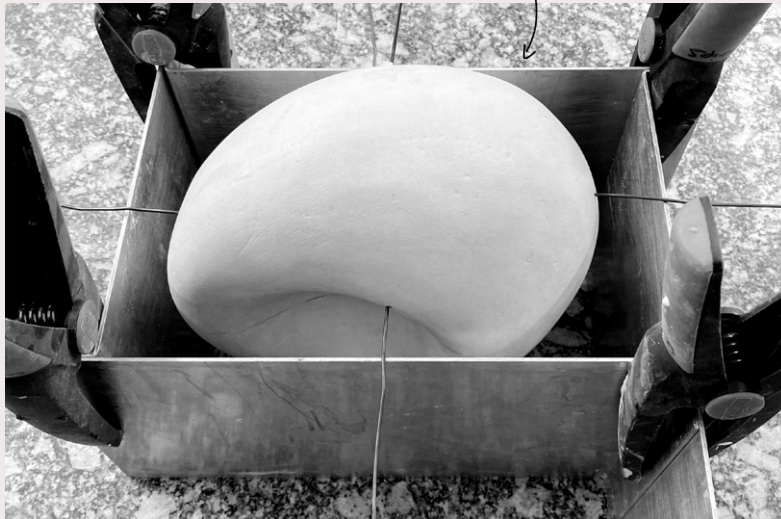


MATERIALS

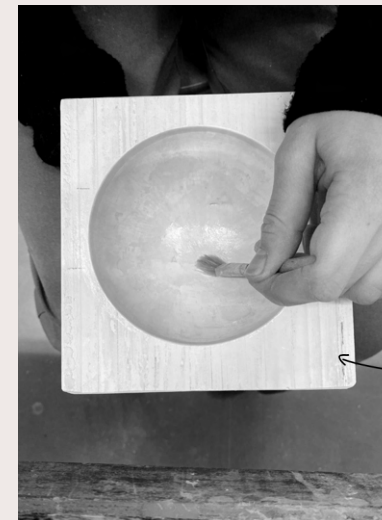
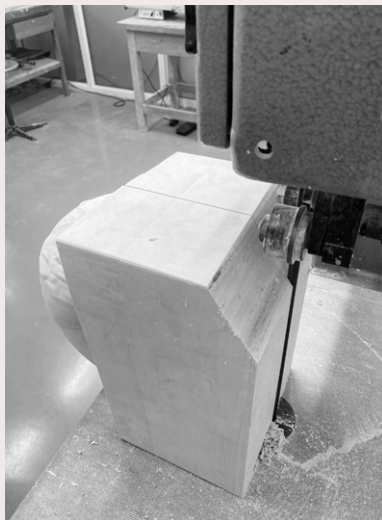
To evaluate the properties of our materials, we tested Ytong, clay, felt, sponges and silicone, for light transmission, surface structure, and hardness.



create a plaster
mold

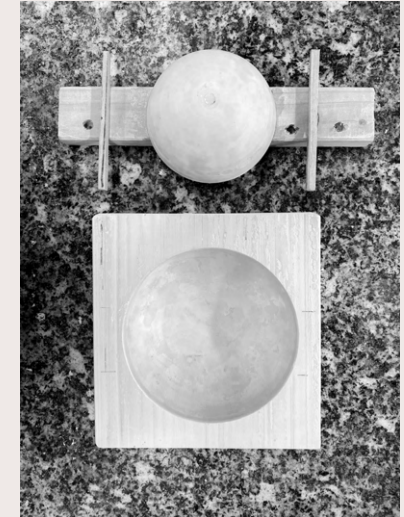


mix plaster
with water



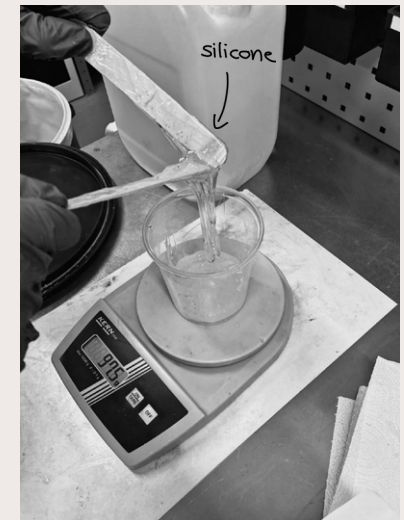
We created negative molds using plaster by mixing it with water, pouring it into molds, and allowing it to set. Once hardened, the plaster was carefully broken apart to extract the mold, then repeatedly sanded and coated to achieve a smooth surface.

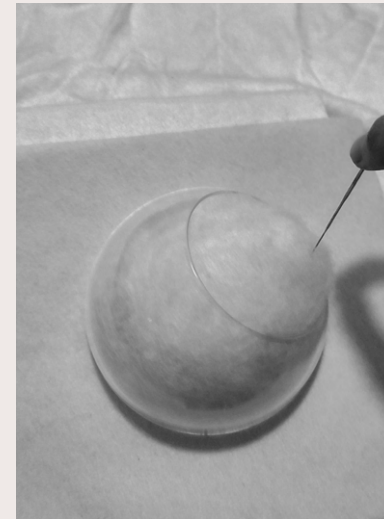
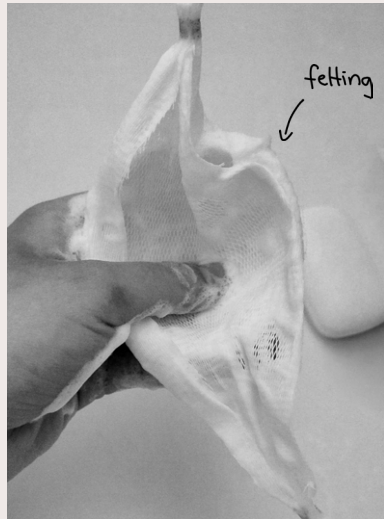
coating



On the left, we created clay impressions of the plaster mold and refined them to conduct experiments on light transmission and surface texture. However, the attempt to create a surface with Ytong appeared too harsh, so we simplified this approach.

On the right, we made a silicone cast to test the thickness of the wall that would remain translucent.





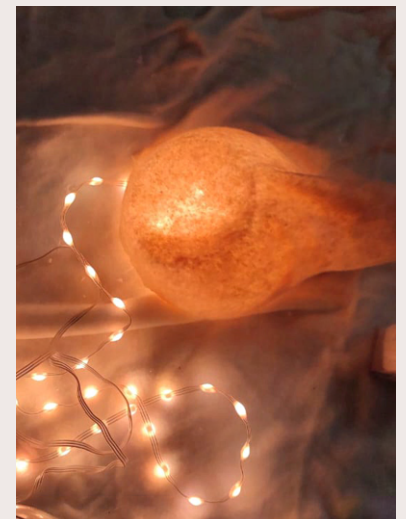
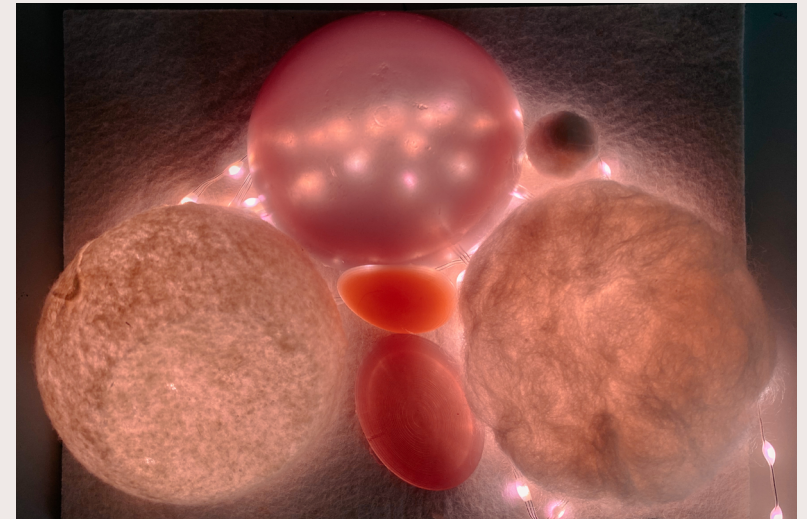
To expand our experiments, we aimed to create a stable shape out of felt for testing light and structure.

Additionally, we worked with sponge, using its natural translucency to achieve interesting effects.

COLOR

Since silicone has a malleable surface, we chose to continue working with this material. In further experiments, we dyed the silicone to determine which shades would create the softest appearance.





MODEL

For the final model, we 3D-printed both the core and the shell of the shape to create a hollow silicone mold, necessary for placing the light source inside. We built the light source ourselves using an ESP32. To ensure even lighting, we scaled down the

base shape and used it as the lamp form. After inserting the lamp, we glued the two silicone halves together and covered the model with felt wool to add an extra visual softness.



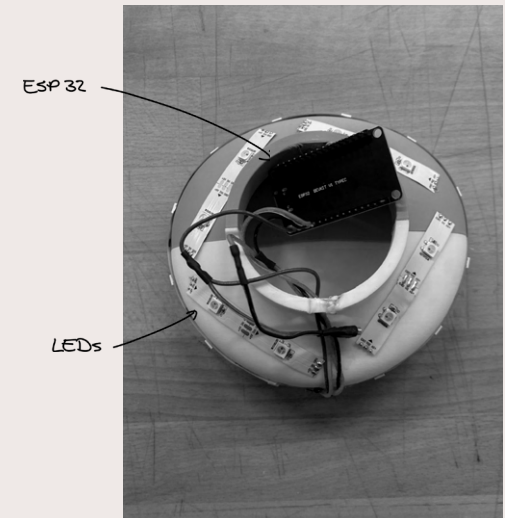


Due to undercuts, we divided the entire mold into an upper and a lower half so that the 3D-printed parts can fit together. From these two segments, we then produced silicone casts with a wall thickness of 8 mm, ensuring that the mold is both stable and compressible.

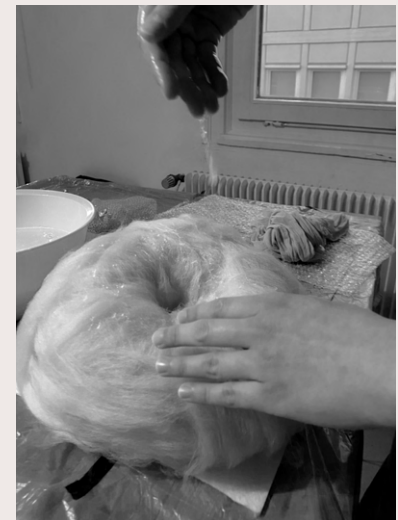


silicone





We designed the internal light source ourselves. It is powered by a battery and can be conveniently controlled via smartphone.

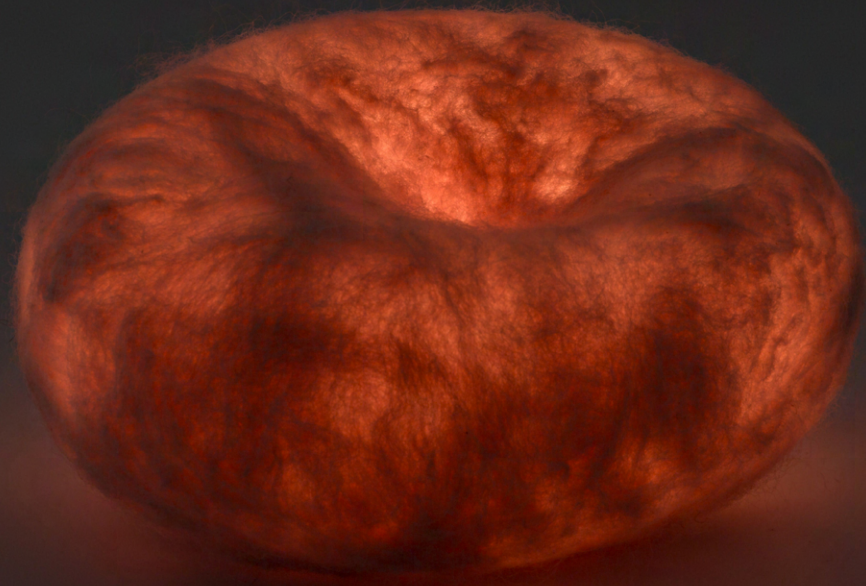


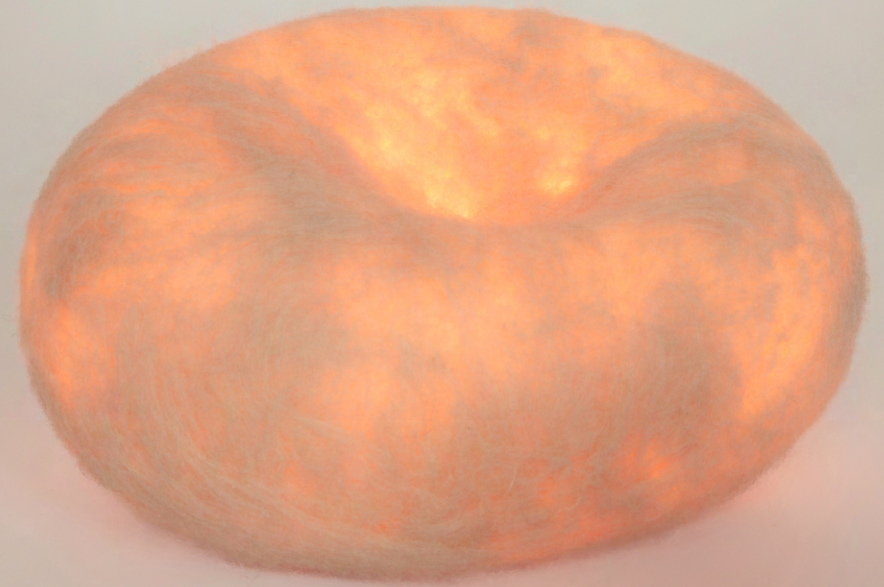
FINAL

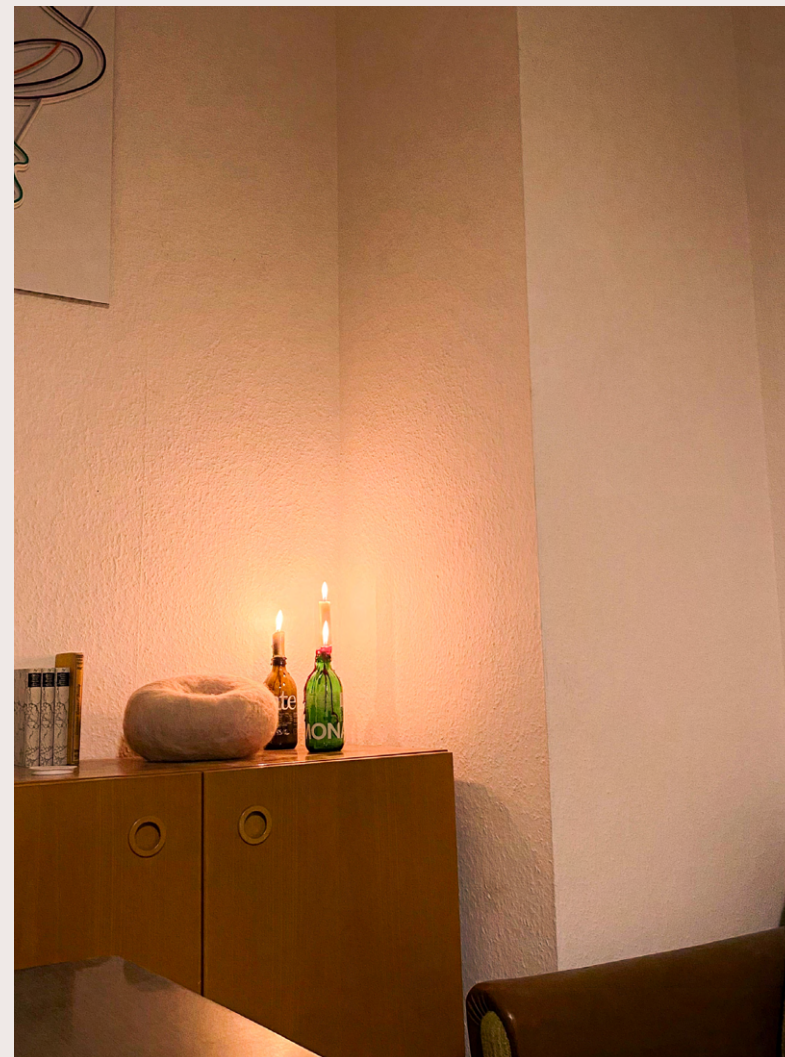
The final lamp consists of a silicone cast form with an integrated light source. The combination of soft silicone and a felt outer layer enhances the overall gentle aesthetic while ensuring even light distribution.

This creates a warm, diffused glow that seamlessly blends into its surroundings without harsh edges, emphasizing the lamp's smooth and soothing character.









CONCLUSION

This project has been an incredibly valuable experience for us. It not only deepened our understanding of aesthetics, but also broadened our knowledge of materials, forms, and color composition. The entire process was both inspiring and enjoyable, opening our eyes to new perspectives on design.

We are very grateful to Jessica Bulling for her support and the valuable insights she provided throughout this journey. We also want to thank Peter Lehrke for his help with model building and Johanna Müller for letting us use her room for the photo sessions.

Thank you!



