Geopolymers for Art Production

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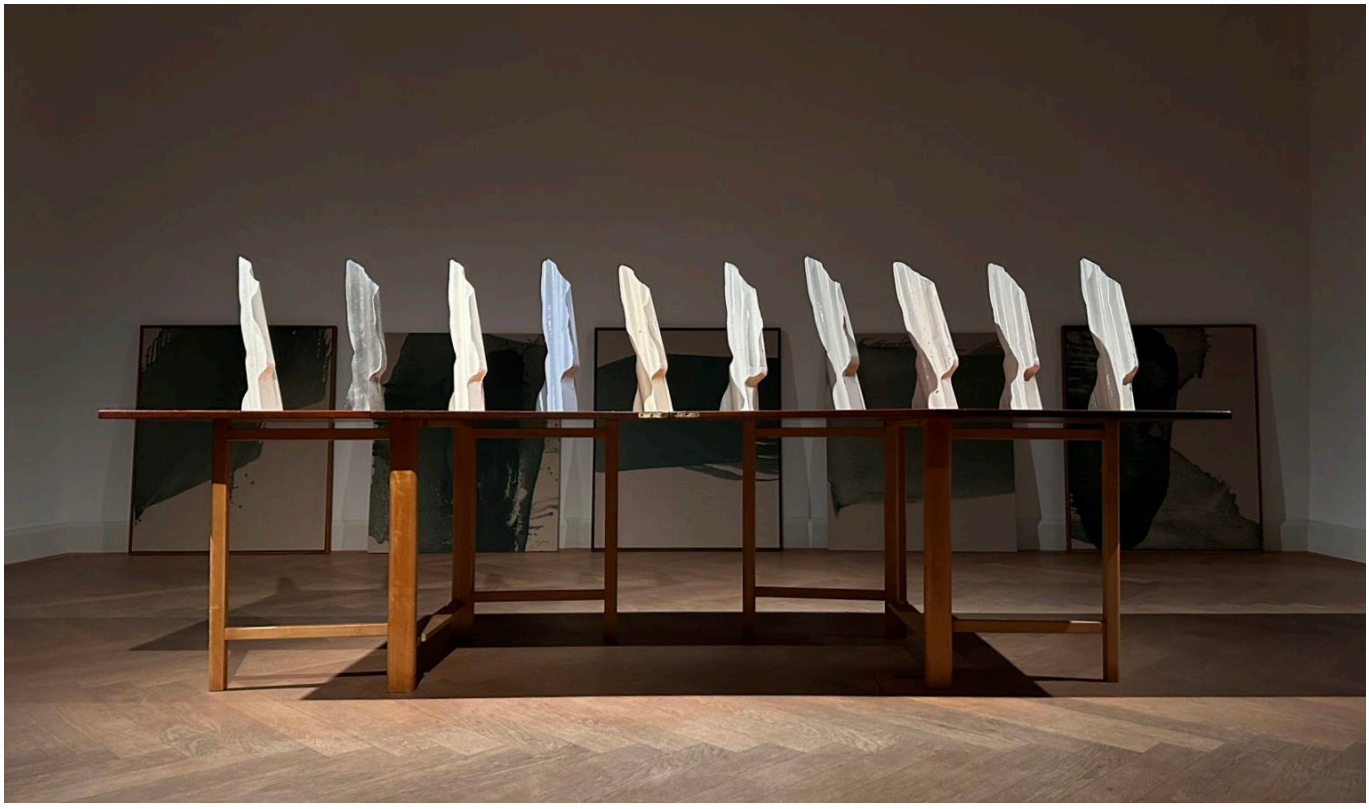
Geopolymer Laboratory for Artworks

Introduction Geopolymers

Geopolymers are a class of silicate-bound, entirely mineral-based artificial stones. They are comparable to natural stone in weight, sensation and permanence, while their composition is related to ceramics and other mineral materials. They occupy a niche among modern materials for specialised technical applications, while also relating to a longer history of mineral-bound materials such as Roman concrete.

Our geopolymer material was formulated without petrochemical compounds and adapted to provide good workability with a wide range of aesthetic possibilities for sculptural applications.



Siyavash Ghassemzadehgan, Fluegel - Limited Edition, Kewenig Galerie Berlin, 2025

Properties

Geopolymers retain many of the physical properties associated with stone, but unlike natural stone they can be cast or built up additively into complex forms. Overall properties include:

- hardening at room temperature without firing
- can be sanded and polished after curing
- adjustable density and weight
- durability, weather and temperature resistant
- suitable for permanent outdoor use

Sustainability

Geopolymers offer a resource-conscious, low-energy and non-petrochemical approach to producing durable sculptural works. A large proportion of the material can consist of stone powders and mineral aggregates obtained from quarried rock. Relevant characteristics include:

- high mineral content
- ambient-temperature curing without firing
- no petrochemical compounds
- reduced material use through additive production

Material Adaptability

The material can be developed specifically for each sculpture, so that adapting the material properties can become part of the artistic process.

Adjustable properties include:

- type and size of aggregates, natural stone components
- colour and pigmentation
- texture and surface through mould, post processing
- technical properties and weight

Applications and external References

Geopolymers are still rarely used in contemporary art and architecture, as both the sourcing of suitable raw materials and the production process require specialised knowledge and infrastructure.

In the arts and architecture geopolymer finds its place in public sculptures and art editions. One recent external reference is Anti-Ruin, developed in collaboration with ETH Zürich for the Venice Architecture Biennale 2025.

Claudia Heinzler, Saygel & Schreiber, Altar and Ambo, Production Samples

Siyavash Ghassemzadehgan, Rocaille, Kewenig Galerie Palma, 2026

Siyavash Ghassemzadehgan, Rocaille, production photos, 2026

Claudia Heinzler, Saygel & Schreiber, Altar and Ambo, Granite - Sand - Pumice, OKR Stuttgart, 2025

Claudia Heinzler, Saygel & Schreiber, Altar and Ambo, Granite - Sand - Pumice, OKR Stuttgart, 2025

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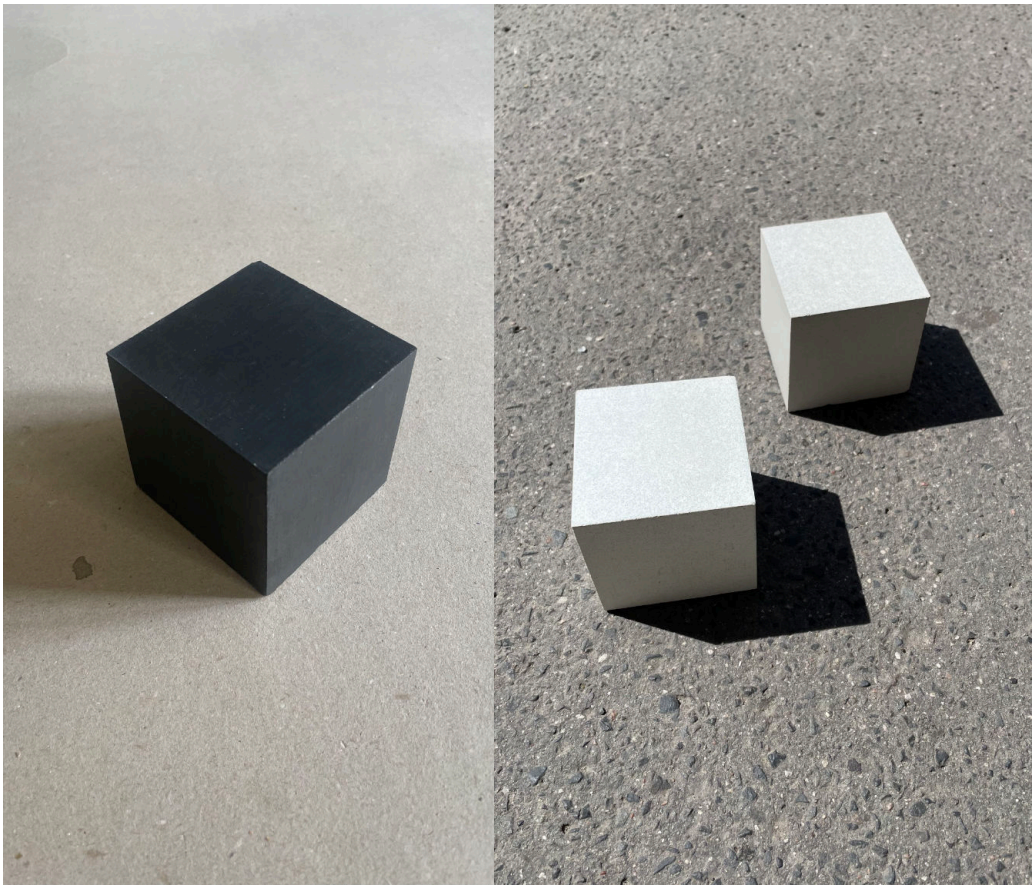
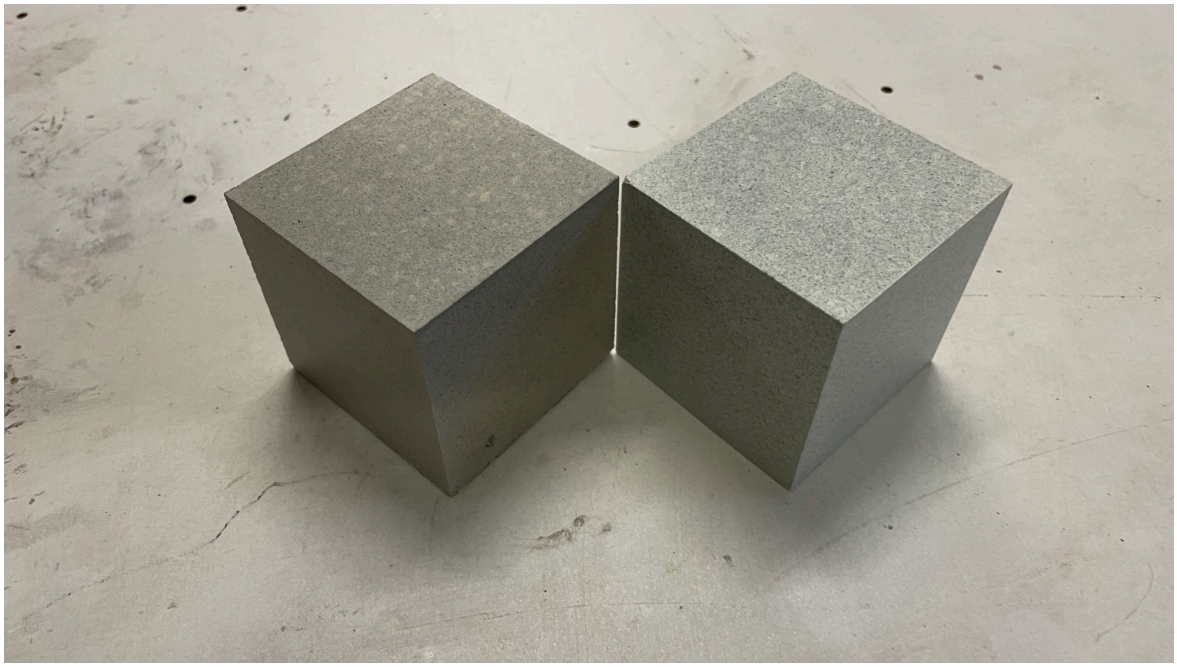
Foto: © Kilian Beutel

René Talmon L'Armée, Pillows, Granite, Berlin - Paris, 2024





Sample Cubes Geopolymer Marble Granite, 2025

Granite Quartzite Greywacke Sandstone

Research: Recreation of egyptian sculpture stones of Neues Museum Berlin, 2023

Referenced Projects (selected):

Siyavash Ghassemzadehgan, Rocaille, Kewenig Galerie Palma, 2026

Claudia Heinzler, Saygel & Schreiber, Altar and Ambo, OKR Stuttgart, 2025

Siyavash Ghassemzadehgan, Fluegel - Limited Edition, Kewenig Galerie Berlin, 2025

René Talmon L'Armée, Berlin - Paris, 2024

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