

# CAAST

ULTRA-HIGH PERFORMANCE CONCRETE

SPRING VALLEY





# SPRING VALLEY

**Spring Valley Corp is a strong team of construction professionals, led by Eric Sommer, with 35 years in the construction industry.**

Spring Valley is focused on delivering top quality products and developing unique solutions for a variety of projects and applications. The team, assembled together, is a reflection of the relentless pursuit of success in construction projects. The Spring Valley team has many years of experience in project management, materials science and engineering.

We can provide an owner, a design team or a construction team with design assistance, product knowledge, and construction details required for their project. The projects completed are a testament to the many customers who have entrusted Spring Valley to realize their architectural visions. Eric Sommer is passionate about the art of construction. He is intensely

interested in the science that goes into this art. Together with the Spring Valley Team, spirit and passion is built into every project. Bring us your wildest architectural vision and we will make it real. We will demonstrate our unparalleled understanding of design by working out every detail in a way that realizes the architect's vision.



# The fusion of art and science.®

CAAST® is an Ultra High Performance Concrete ( UHPC ) panel made from a cement based composite, reinforced with PVA ( Polyvinyl Alcohol ) fibres.

CAAST® offers far superior strength and durability compared to other materials. These attributes create a material that is long-lasting and requires minimal maintenance. CAAST® panels are developed and manufactured at our Ancaster headquarters.



Exceptional Durability



Environmental Sustainability



Zero Maintenance



Aesthetic Flexibility





# Environmental Sustainability

CAAST® panels have a very long life thanks in part, to their very durable impermeable matrix. The mechanical properties of UHPC allow for more slender profiles, reducing mass and embodied energy. When combining long service life and lower mass, CAAST® UHPC is an integral component of environmentally sustainable design.

# Exceptional Durability

CAAST® Ultra High Performance Concrete (UHPC) technologies have a high degree of strength and weather resistance. The robustness of UHPC comes from a denser matrix that transfers stress very effectively while also restricting water and chemical infiltration with an ultra-low coefficient of permeability.





# Low Maintenance Material

Once permanently installed, maintenance is limited to cleaning the surface as desired by the owner & building management team. CAAST® panels are 10 times less permeable than granite making them stain and weather resistant.

# CAAST

## PRODUCT RANGE

Panel sizes and colors





## CAAST<sup>®</sup> Performance

### Strength

Compressive	112 - 150 MPa
Flexural	10 - 20 MPa
Youngs Modulus (E)	40 - 50 GPa
Direct Tension	4 - 7 MPa

### Durability

Freeze/thaw (after 300 cycles)	95 - 100%
Salt-scaling (loss of residue)	0 - 0.013 lb/ft <sup>2</sup>
Abrasion (relative volume loss index)	1.7
Oxygen permeability	< 10 <sup>-9</sup> ft <sup>2</sup>
Carbonation depth	< 0.02 in.

### Other Properties

Density	2.2 - 2.5 S.G.
Capillary porosity	< 1%
Total porosity	3 - 6%
Post cure shrinkage	< 10 <sup>-5</sup>
Fire Behavior	Non-combustible

## Sizing

Panels are available to a maximum sheet size of 4' x 12', custom sizing is available.



1220 x 3670 mm (4' x 12')

## Thickness



9.25 lbs/ft<sup>2</sup>

19 mm (3/4")



12.5 lbs/ft<sup>2</sup>

25.5 mm (1")



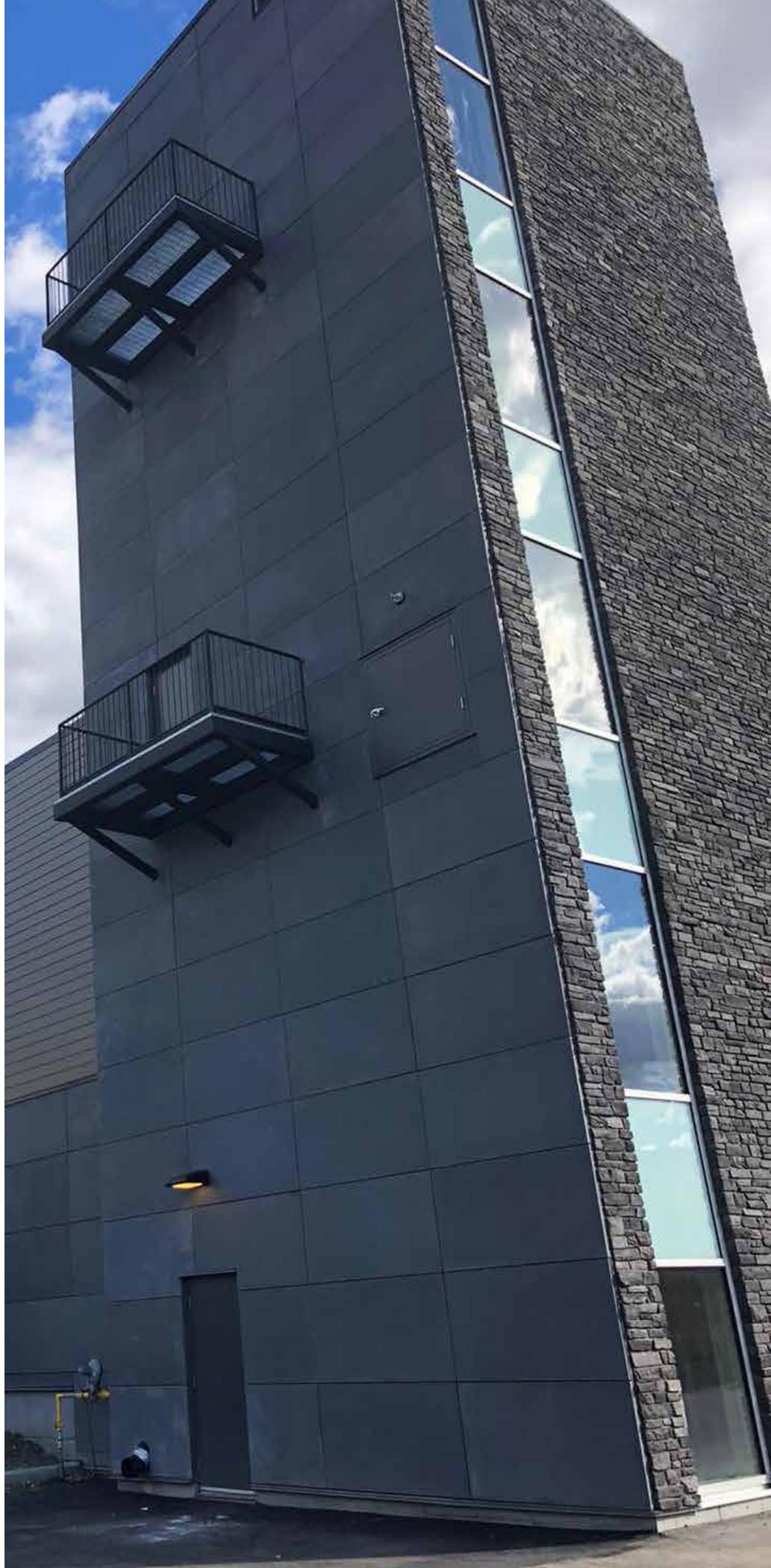
18.75 lbs/ft<sup>2</sup>

38 mm (1.5")



25 lbs/ft<sup>2</sup>

51 mm (2")



## Low Permeability

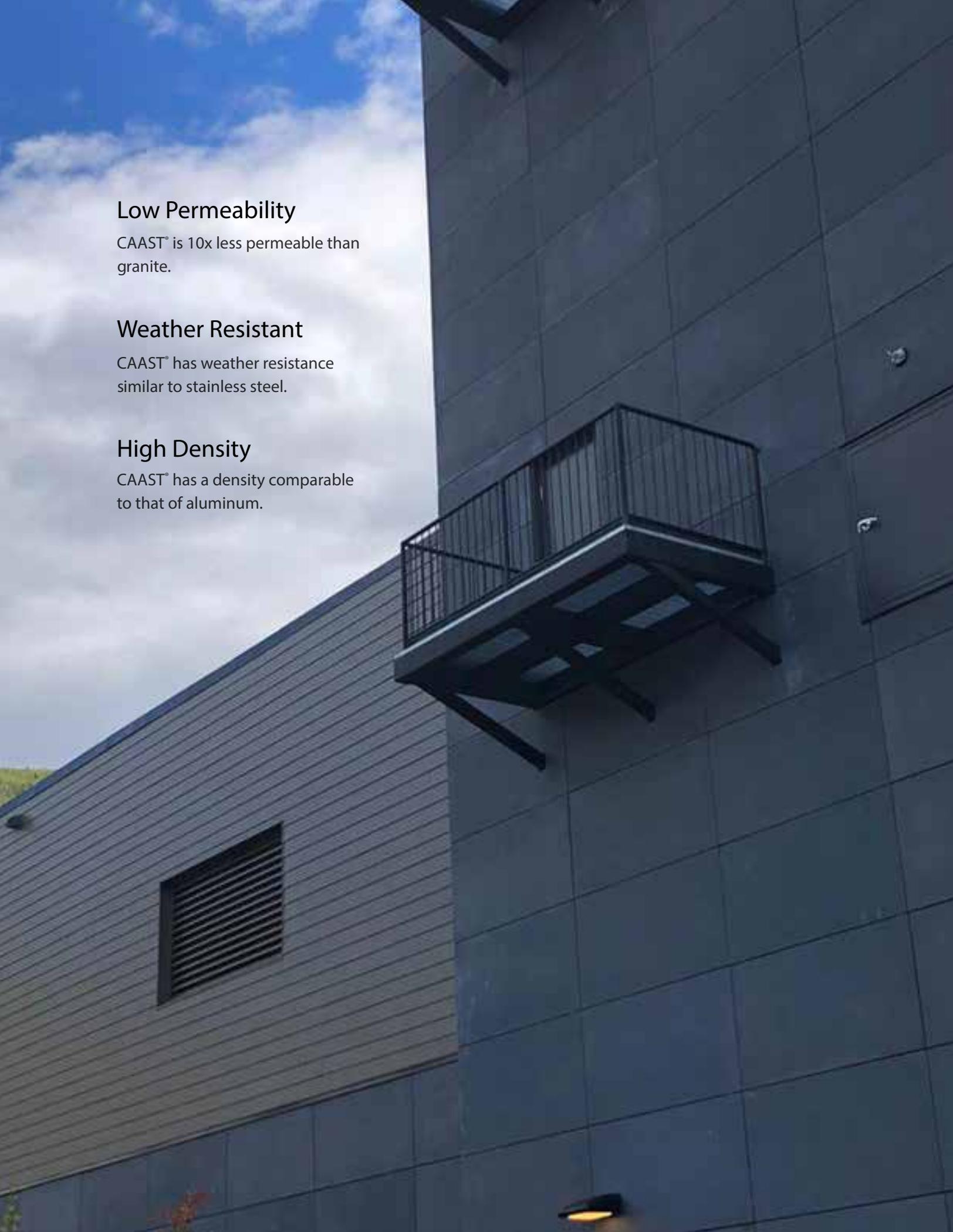
CAAST<sup>®</sup> is 10x less permeable than granite.

## Weather Resistant

CAAST<sup>®</sup> has weather resistance similar to stainless steel.

## High Density

CAAST<sup>®</sup> has a density comparable to that of aluminum.



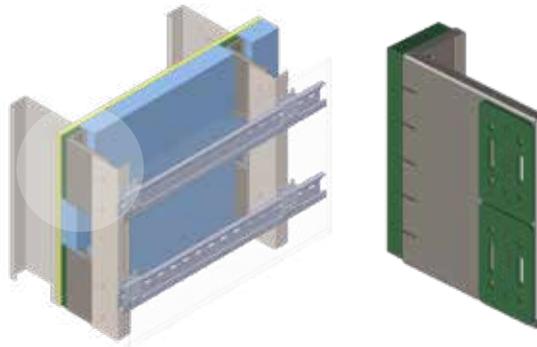
# iCLAD by Spring Valley

iCLAD is a thermally broken, ventilated rainscreen system that provides maximum efficiency at cost savings compared to alternatives. iCLAD prevents thermal bridging caused by other installation systems. This lessens the environmental impact of the building and can provide significant heating and cooling cost savings. iCLAD provides ventilation behind the panel, which prevents moisture buildup. CAAST<sup>®</sup> performs best when installed with the iCLAD ventilated rainscreen cladding system.

For more information about the iCLAD ventilated rainscreen system, visit our website at [www.springvalleycorp.com](http://www.springvalleycorp.com).

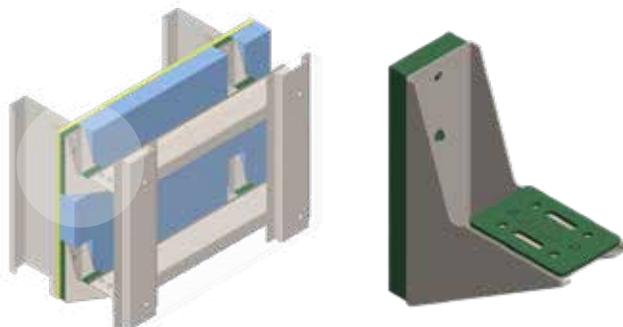
## Concealed Fastening

The iCLAD vertical “L” style clip provides a vertically oriented girt on which to fasten a horizontal oriented concealed fastening substructure system.



## Exposed Fastening

The iCLAD horizontal “H” style clip provides a horizontal girt upon which to fasten a vertically oriented hat channel for hanging an exposed fastening system.





Natural White



Titanium White



Limestone



Pewter



Slate



Beryl Blue



Sky Blue



Cobalt



Sage



Moss



Spruce



Cream



Wheat



Goldenrod



Buff



Acorn



Earth



Salmon



Terracotta



Brick

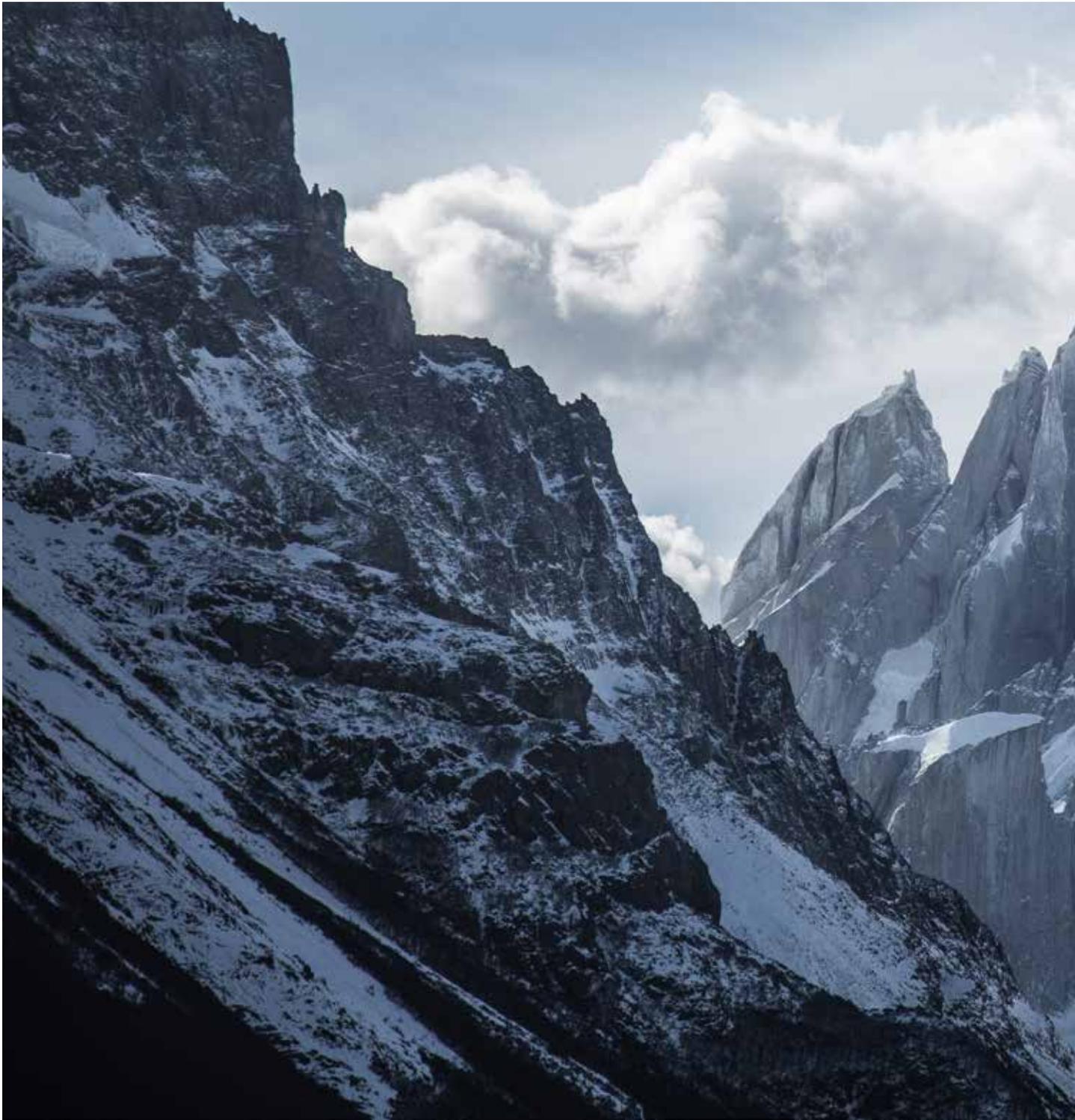
# Color Selection

CAAST<sup>®</sup> is available in 20 standard colors and several custom textures. Custom colors and finishes with the addition of other elements or minerals can help you achieve your unique vision. Samples are available upon request.

Review of the physical sample is recommended prior to placing an order. Due to limitations of the printing process, color reproduction may not be identical.

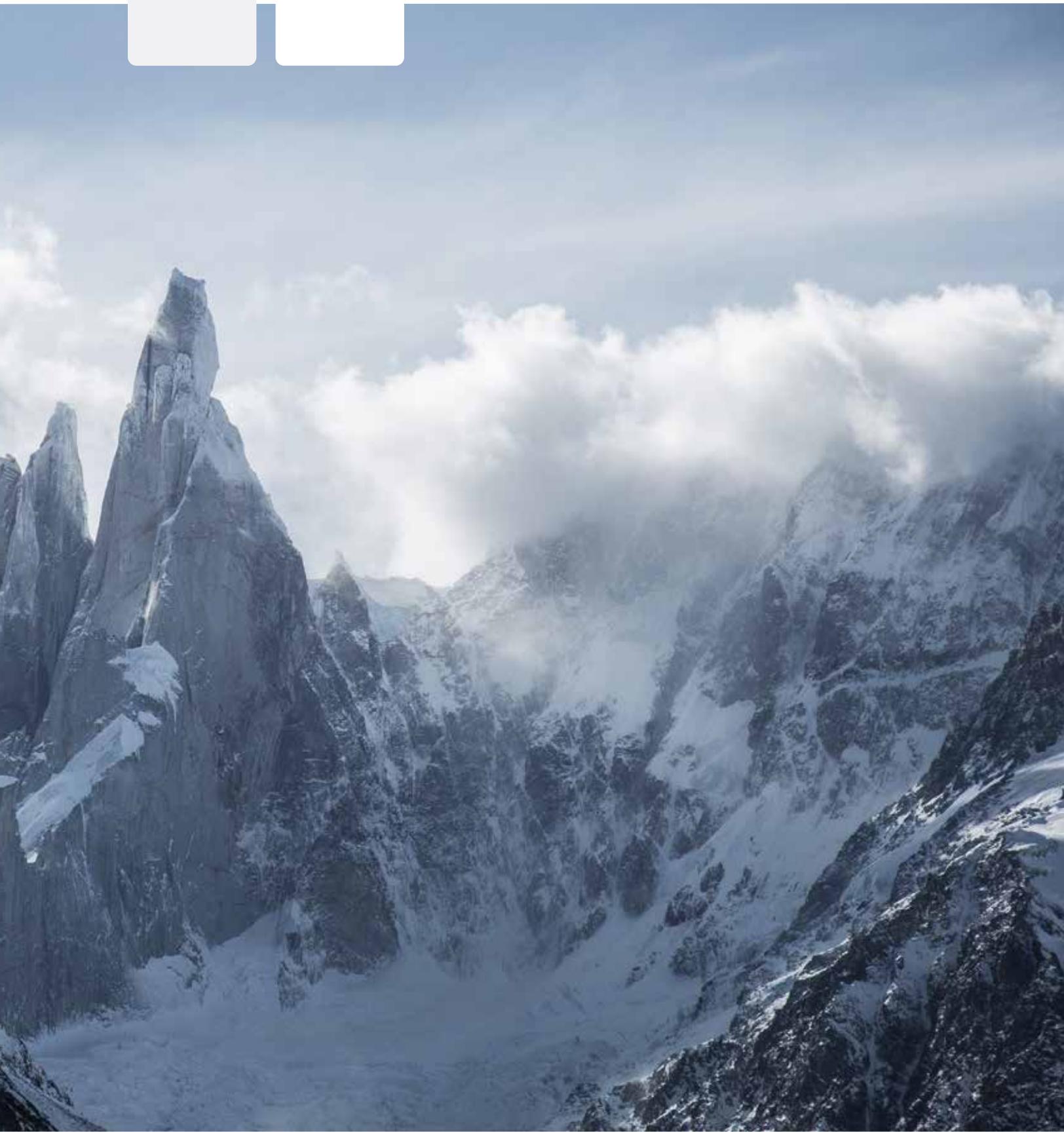
# Inspired by Nature

The CAAST® color selection is inspired by natural elements and landscapes from around the world. Our design team will work with you to bring your unique vision to life



Natural White

Titanium White



Salmon



Terracotta



Brick



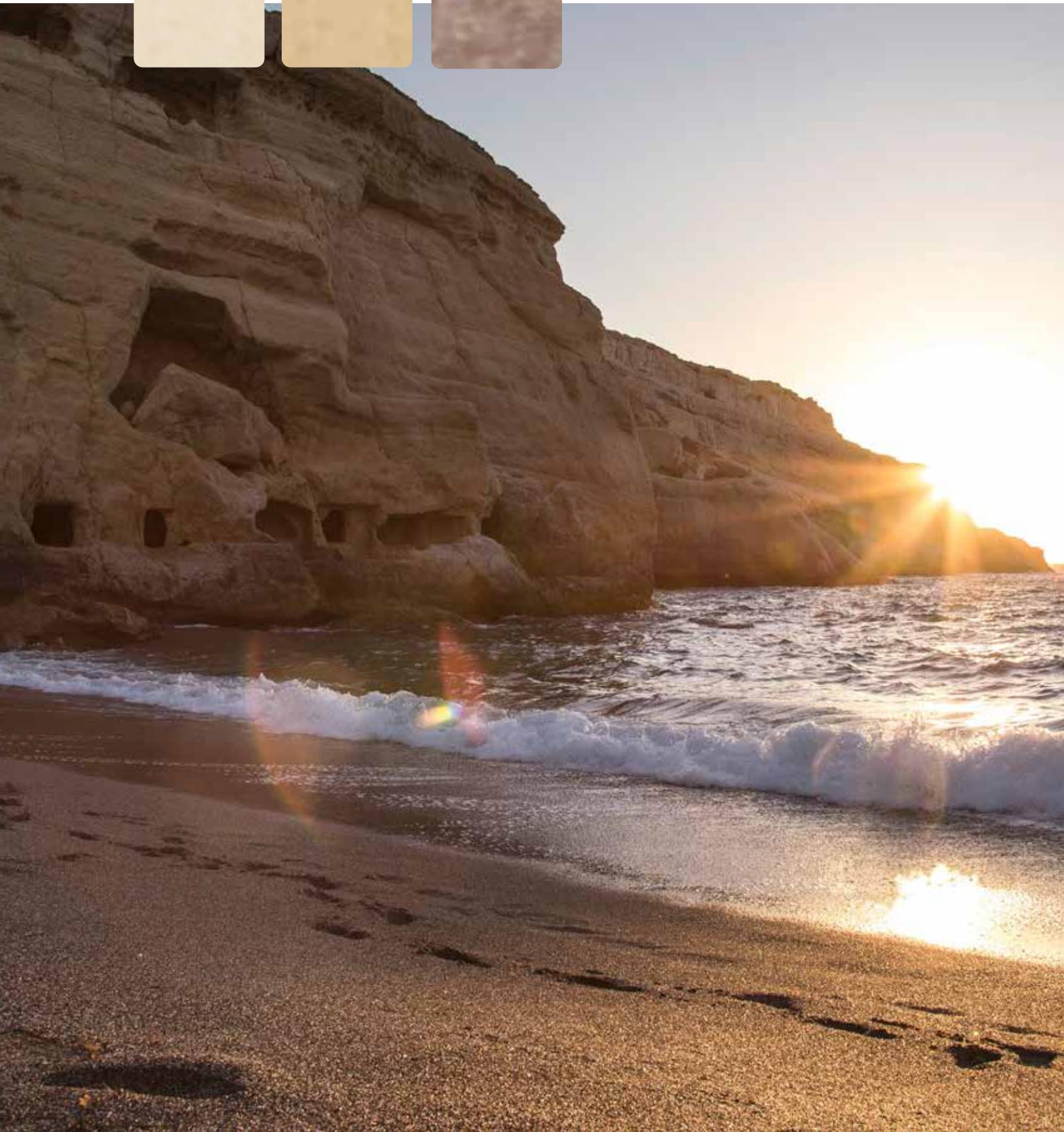
Buff



Acorn



Earth



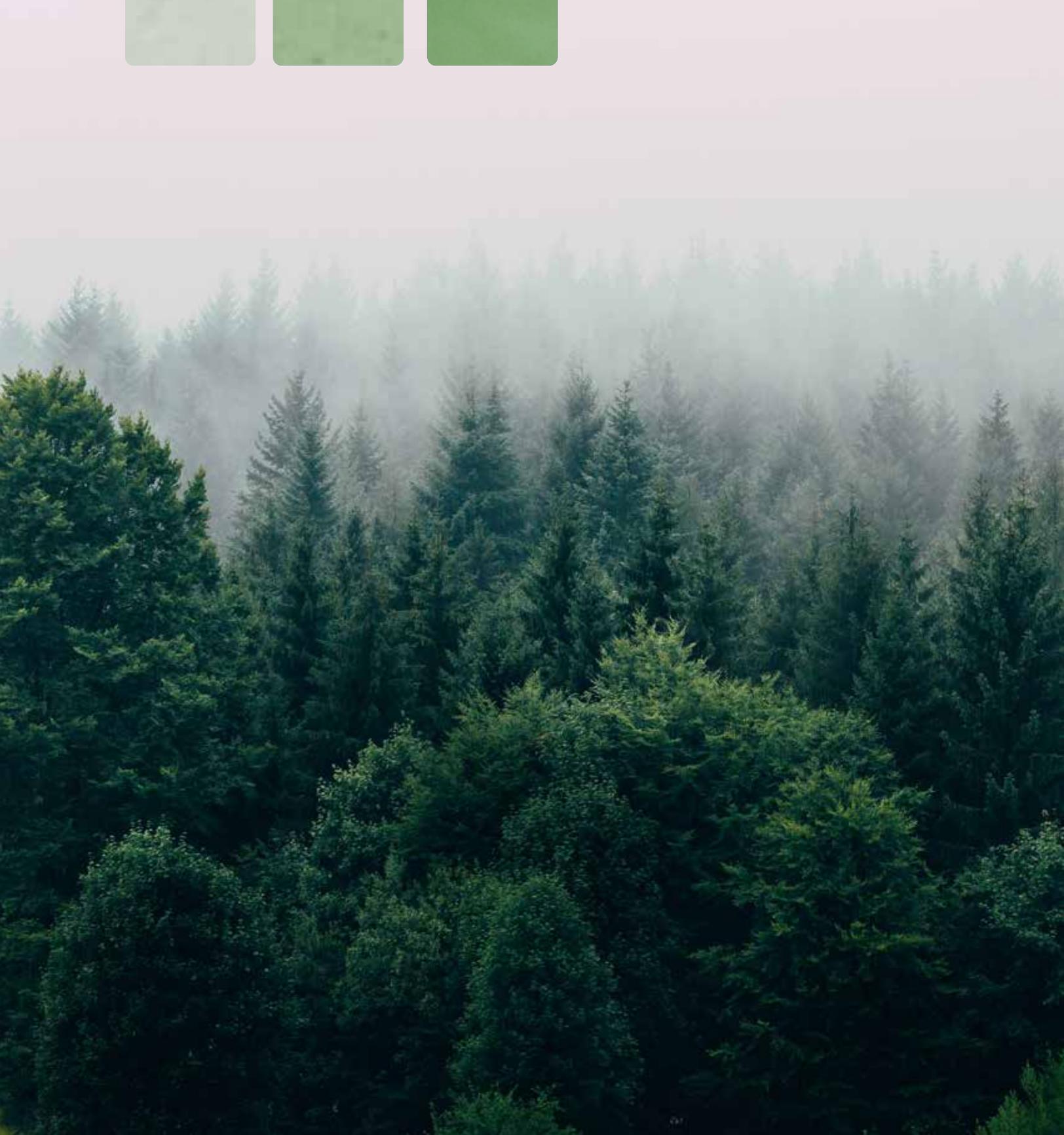
Sage



Moss



Spruce



Cream



Wheat



Goldenrod



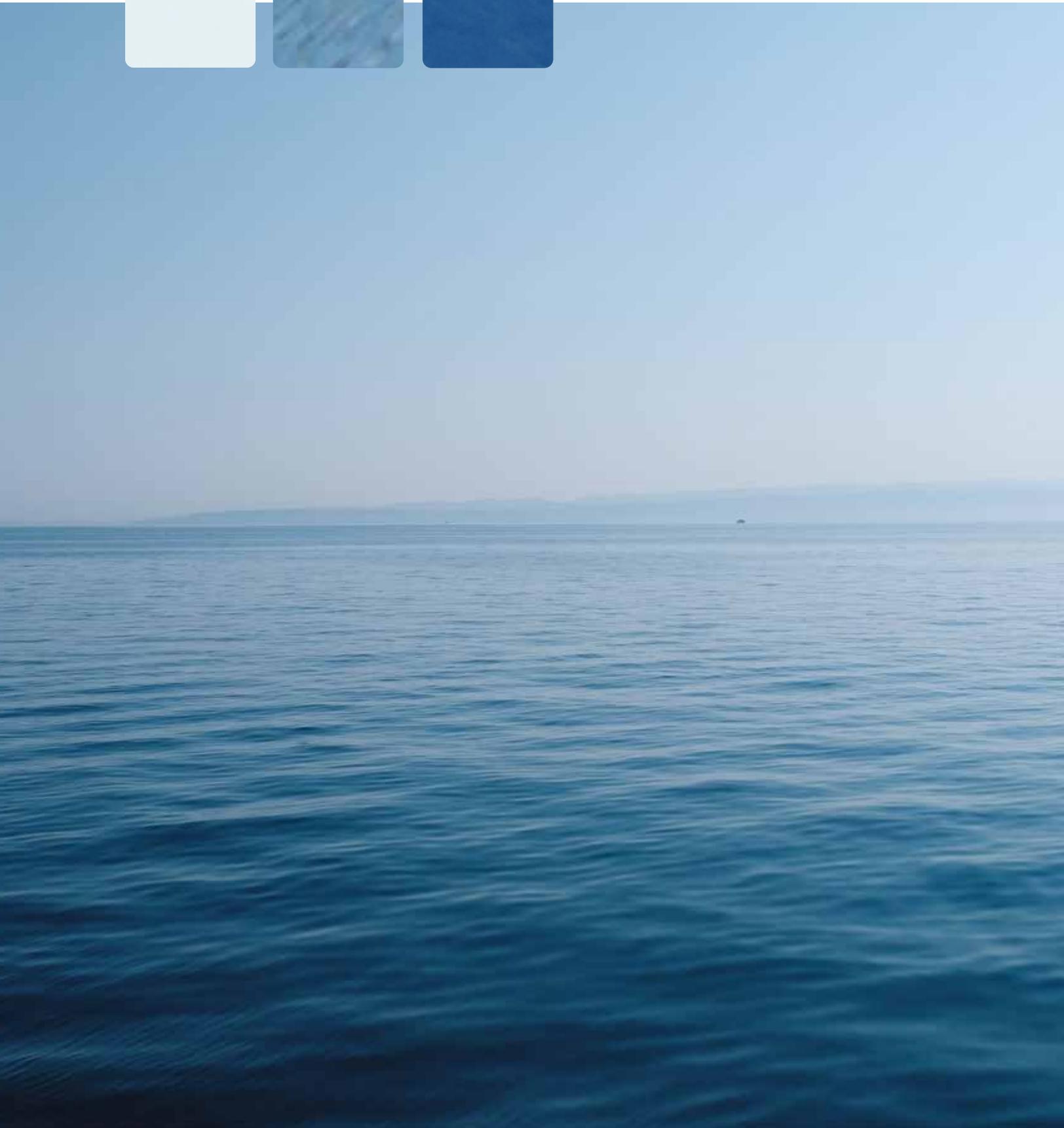
Beryl Blue



Sky Blue



Cobalt



Limestone



Pewter



Slate



# Built To Perform

We have recognized the need for a strong, durable, and permanent solution to building cladding. We are dedicated to a sustainable future, as CAAST is significantly stronger and more durable than traditional concrete therefore allowing less material to be used. With a drive to create beautiful architecture while contributing to a lasting future, we have created CAAST.

## Contact Us

t: 905.648.1881      735 Trinity Road South  
f: 866.768.1982      Jerseyville, ON L0R 1R0

[sales@springvalleycorp.com](mailto:sales@springvalleycorp.com)  
[caastconcrete.ca](http://caastconcrete.ca) or [springvalleycorp.com](http://springvalleycorp.com)

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