# RHINOZ ULTI WALL

The Ultimate Solution to All Wall Problems





## **RHINOZ** ULT WALL

## The Ultimate Solution to All Wall Problems

Ulti/Wall is the new alternative wall solution that answers all pain points of builders and building users due to its selections of wall type, material type, and additional property that are customizable to suit all needs. Our main purpose is to achieve a better general property such as higher strength for higher load bearing ability or lighter weight for more economic construction, as well as the specialized property for specific function such as minimizing condensation for rooms with different temperature or shielding radiation for x-ray room, while lessen application problems, for better constructing and living experience.

With our expertise in construction chemical products, we offer a complete solution of designing, formulating, and manufacturing service of the compounds of wall material up until the finished products of installation, joint sealing, and finishing.



## CLIENT'S REQUIREMENT

#### INITIAL PROPOSAL

## RESEARCH & DEVELOPMENT

## PROTOTYPE / **FIELD TEST**

## **PRODUCT** CONFIRMATION

Scoping product and Propose service, pain point and concept and specificarequirement, product tion, confirm project concept, target market directions, factors testing, and customer, target observation, applicaapplication, project tion and equipment/ timeline.

product machine potentials.

Chemical technology exploration, material sourcing, lab formula selection, initial cost evaluation.

analysis, monitoring.

Real application and Product & service up-scaled test, factors confirmation, document result & report, business model. business agreement.

















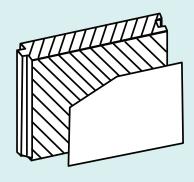






# CREATE YOUR OWN ULTIMATE WALL SOLUTION

## **CUSTOMIZE** WALL



Application:
Wall Panel   □ Block   □ Floor Slab   □ Roof
☐ In Line ☐ At Site
Type:
Sandwich Panel Fairfaced Panel Dry Wall
ALC/AAC CLC Hollow Core
Other
Core Material
Face Material
Other

## **CUSTOMIZE**

**SPECIFICATION** 



Density

kg/m<sup>3</sup>

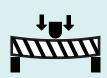
Target Specification:





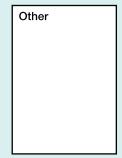
Compressive Strength

mpa



Flexural Strength

mpa



## CORE SELECTION

## **ULTI WALL** Light

Extra Light Weight, Increased Strength

- Increased impact resistant
- Thermal and sound insulation
- Consistency of EPS dispersion
- Improve condensation resistant property
- · Cost-effective foundation system
- Improved drill and hang capability
- Antimicrobial, hygienic
  - Exterior and moist area even with out topping

• Applicable for organic/bio license • Improved drill and hang capability

Density (28 days) = 800-850 kg/m<sup>3</sup> (adjustable)

Compressive Strength (28 days) = 4-5 mpa (adjustable)

# EPS Foam + Light Weight Cement

## **ULTI WALL** Green

Wall of the Future, Clean Living, Clean Planet

- Non-toxic, eco-friendly
- Increased impact resistant
- Thermal and sound insulation Antimicrobial, hygienic
- Improve condensation resistant Exterior and moist area even with
- property out topping

Density (28 days) = 850-900 kg/m³ (adjustable) Compressive Strength (28 days) = 4-5 mpa (adjustable)

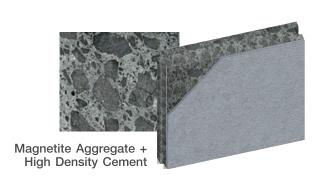
# Bio-based Compound + Light Weight Cement

## **ULTI WALL** Power

Higher Weight in Less Volume

- · Withstand mechanical force with lower volume
- · For radiation shielding application
- · Decrease vibration and dampen sounds
- · Heat and cold storage (underfloor heating or ice rinks)
- · Lower volume for space and design limitation
- Ideal for underwater construction (upward pressure)
- Antimicrobial, hygienic
- · Exterior and moist area even with out topping

Density (28 days) = 3,700-3,800 kg/m³ (adjustable) Compressive Strength (28 days) = 65-70 mpa (adjustable)



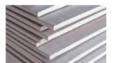
## **FACE SELECTION**







**Wood Cement Board** 



Gypsum Board



MGO Board



**Shot**crete (Precast Topping)



**OSB Board** 

## **FEATURE SELECTION**



#### **ULTRALITE PERLITE**

- Non-metallic volcanic mineral heated to expand 4-20 times
- Non-conductive tiny air cells in perlite particle
- Ultra lightweight
- Permanent excellent thermal insulation



#### SILICA AEROGEL

- Best insulator with low thermal conductivity (0.0197W/(m-k)
- Fire Resistance with wide operating temperature
- Lightness & volumization, with porosity >90%
- Hydrophobic, repels water & moisture
- Reduce sound transmission with energy dampening



#### **PIGMENT**

- Creating added value and structural improvement by adding permanent beauty
- Excellent lightfastness and weather resistance property for intensive exposure
- Integral coloring, remain aesthetic even when some part breaks off



#### **BLUE MORTAR**

- Adding new organic compound to meet USDA BioPreferred standard of bio-based requirement
- Testing using ASTM D6866 for bio-based content testing (total organic carbon content)



#### **MAGNADENSE**

- Space and design limitation but maintain force withstanding property
- Radiation shielding : hospital, lab, nuclear plant
- Reduce vibration & dampen sound : railway Traffic
- Heat & cold storage : ice rinks, underfloor heating
- Underwater : quay, gravity-based structure



### **HYGIENIC & ANTIMICROBIAL PROPERTY**

APPLICATION ANTIMICROBIAL Hospital and health care Moid Mildew Elder care Clean room Fungi Laboratory Yeast Residential Algae Kids room

## SUPPLY FORM



**Powder Compound** 

Semi-Finished

Finished-Product



Liquid Compound

Semi-Finished



Formula

Licensing





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