

ARTSTONE

(Industrial Technology)

OTHERS

(Manual Production)

01. VISUAL AND SENSORY PERCEPTION

Texture and Depth

Hyper-Realistic Texture: The surface is not just paint; it is constructed with light refractions, shadow plays, and 3D texture depth. Thanks to model design technology, "pattern repeat" is minimal, preserving the randomness found in nature. All fine lines are flawless and clear.

Flat Print Feeling: The texture is given in the mold, but the paint is superficial. When touched, the film layer of the paint is evident, and under light, the surface shines like a "plastic film," resulting in low depth and texture perception.

Tactility

Natural Touch: Thanks to the correct and functional mineral density, it provides the coldness of stone, the warmth of wood, and the solidity of concrete when touched.

Plastic Perception: Due to low mineral and high chemical content, it gives a 'light' and 'artificial' feeling when touched.

Tone Consistency

Robotic Standard: Thanks to automation, the 1st panel and the 1000th panel have the exact same tone. With our special paint technology and technique, there is no color difference between panels, ensuring façade integrity.

Visual Estimation Mix: Due to 100% manual panel production and painting, tone differences occur between batches, which are noticed after installation. Subsequently, all panels must be repainted, which spoils the naturalness and quality.

Traceability

Full Traceability: Each panel has a traceability barcode on the back containing the production date and batch number.

No Traceability: It is unclear when the product was made or which resin was used; daily production varies constantly. Retrospective tracking cannot be done when issues arise.

Aging

10-Year Non-Fading: With inorganic pigments, technological binders, and UV shields, it retains its color under the sun and is resistant to fading. There is absolutely no deterioration in texture or pattern over time.

Rapid Fading: UV resistance is weak. The color fades, the surface chalks (dusts), and the material takes on a cheap appearance.

02. SYSTEM AND ASSEMBLY (CALIBRATION)

Thickness Tolerance

Standard Thickness and Section: Thanks to robotic casting and pressing technology, the thickness is equal at every point of the panel.

Wavy Section: In hand-cast panels, resin does not spread homogeneously. One end of the panel may be 4mm while the other is 8mm. This thickness and weight difference creates static problems in the cladding later on.

Thermal Expansion

Preserves Form: With low expansion (CTE) and high heat deflection temperature (HDT), it stands straight like an arrow even in summer heat. It is resistant to thermal shocks between -40°C and +120°C.

Warping and Cupping: The panel softens (plasticizes) in heat, expanding to create swelling and waves on the façade. The material constantly works during day-night temperature differences, loosening screws; creating renovation and cost risks.

Joint Level (Flushness)

Flawless Transition: Since the thickness is standard, when two panels come side by side, the surface joins "flush to flush."

Lipping/Teething: Due to thickness differences, level differences occur at joints. When light hits, these defects cast shadows and become visible.

03. DURABILITY AND SAFETY

External Resistance

Full Resistance: With yacht and wind turbine technology (Isophthalic & Vinylester binders), it is fully resistant to water, sun, salt, and corrosion. It is antibacterial; it does not harbor mold, fungus, or algae.

Risky Structure: Standard, low-cost unqualified polyester absorbs moisture over time, its structure deteriorates (osmosis risk), and paint peels. It releases harmful styrene gas. Due to its porous structure, it breeds mold and smells in damp environments.

Joint Structure

Flexible System: The hybrid polymer filler flexes with the panel; it does not crack. The system breathes. It adapts to the movement of the structure during building settlements or light earthquakes.

Brittle Joints: Hard and heat-insensitive polyester putties ossify over time. When the panel moves, the joint cracks. (In temperature changes) The panel works independently of the building; joints crumble at the slightest vibration.

Chemical and Health

Stain Resistant: The surface technology is resistant to cleaners and external pollutants. It is easy to clean.

Styrene Gas and Stains: Surface protection is weak. Cleaning chemicals can strip the paint or leave permanent stains. Also, due to low-cost focused production, it contains high styrene, posing a risk of gas emission threatening human health indoors.

04. MECHANICAL STRENGTH

Inner Structure

Locked Minerals: Functional needle-like and angular minerals are chemically locked into the resin with silane technology; they do not separate. Fiberglass reinforcement is homogeneous, ensuring equal strength in every cm² of the material.

Weak Filler: Round marble dust/calcite slips under load, weakening and embrittling the structure.

Impact Resistance

Shock Absorber: Rigid but tough. It dampens impact energy and does not shatter.

Brittle/Soft: Either it is brittle like glass (cracks) or it dents immediately upon impact. "Whitening" or crack propagation is seen on the surface when hit. The paint on top scratches or peels off easily.

Dismantling

Reusable: It does not break when dismantled; it comes off in one piece. It can be mounted elsewhere with low waste.

Single Use: It shatters and falls apart when dismantled; it cannot be reused and becomes waste.

Stability and Static

Stable: A 4 m² panel stands upright like a rigid plate without bending under its own weight.

Bowing: Due to its thin and weak structure, it bows under its own weight in vertical storage or assembly. It cannot stand upright alone; it softens in heat. It has low wind load resistance and carries a risk of breaking or tearing off in storms.

Acoustics

Solidity: Correct mineral density contributes to sound absorption and prevents hollow ringing.

Echo and Ringing: Hollow or very light structures transmit sound and make a hollow sound (ringing) when tapped. It makes no contribution to sound insulation.

RESULT AND WARRANTY

Market products sell the first-day appearance. Artstone guarantees behavior after 10 years, installation perfection, **certified safety**, and advanced engineering.

