



**SECTION 04 42 00
SINTERED STONE CLADDING**

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- 1.1.1 Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- 1.2.1 Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

- 1.2.1.1 Sintered stone panels for exterior cladding.

- 1.2.2 Related Work: The following items are specified in other Sections:

- 1.2.2.1 Section 06 16 00 - SHEATHING for sheathing behind facade system.

- 1.2.2.2 Section 07 27 00 - AIR BARRIERS for air barrier behind facade system.

- 1.2.2.3 Section 07 42 49 - SINTERED STONE VENTILATED FACADES for façade cladding.

- 1.2.2.4 Section 07 62 00 - SHEET METAL FLASHING AND TRIM for copings, flashings, and other sheet metal work not part of facade assemblies.

1.3 SUBMITTALS

- 1.3.1 Product Data: Include manufacturer's product specifications, standard details, test results, and general recommendations.

- 1.3.2 Shop Drawings: Include plans, sections, details, and attachments to other work, including blocking. Detail fabrication and installation, including field joints.

- 1.3.3 Tests and Certifications: Manufacturer's documentation for tests and certifications.

- 1.3.4 Verification Samples: Representative sample of each color and texture proposed for use.



1.4 QUALITY ASSURANCE

1.4.1 Fabricator/Installer Qualifications: Manufacturer's Approved Fabricator certification required.

1.4.2 Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for fabrication and execution.

1.4.2.1 Build mockup of area as shown on the Drawings.

1.4.2.2 Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4.2.3 Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Comply with manufacturer's recommendations for transport and storage, including placement of sheets on metal supports or suitable structures. Move and handle on sides to prevent bending. Protect from standing water.

1.6 PROJECT CONDITIONS

1.6.1 Field Measurements: Take field measurements before fabrication to the greatest extent practical. Coordinate fabrication schedule with construction so that work can be performed without delays due to fabrication and delivery.

1.7 WARRANTY

1.7.1 Warranty: Provide manufacturer's standard limited warranty against defects.



PART 2 - PRODUCTS

2.1 MANUFACTURER

2.1.1 Lapitec S.p.A., via Bassanese 6, 31050 Vedelago (Treviso) Italy, tel. +39 0423 703811, fax. +39 0423 709540, info@lapitec.com, www.lapitec.com.

2.2 TECHNICAL DATA

2.2.1 Size, Color and Texture:

- 2.2.1.1 Panel Thickness and Dimensions: 1/2 inch thick, 132-1/2 inches by 59-1/16 inches.
- 2.2.1.2 Panel Thickness and Dimensions: 3/4 inch thick, 132-1/2 inches by 59-1/16 inches.
- 2.2.1.3 Panel Thickness and Dimensions: 1-1/4 inch thick, 132-1/2 inches by 57-1/2 inches.
- 2.2.1.4 Color Range: Arabescato Michelangelo.
- 2.2.1.5 Color Range: Arabescato Perla.
- 2.2.1.6 Color Range: Arabescato Corallo.
- 2.2.1.7 Color Range: Bianco Assoluto.
- 2.2.1.8 Color Range: Bianco Artico.
- 2.2.1.9 Color Range: Bianco Polare.
- 2.2.1.10 Color Range: Bianco Crema.
- 2.2.1.11 Color Range: Avana
- 2.2.1.12 Color Range: Moca.
- 2.2.1.13 Color Range: Ebano.
- 2.2.1.14 Color Range: Grigio Cemento.
- 2.2.1.15 Color Range: Grigio Piombo.
- 2.2.1.16 Color Range: Nero Antracite.
- 2.2.1.17 Color Range: Nero Assoluto.
- 2.2.1.18 Color Range: Bianco Aurora.
- 2.2.1.19 Color Range: Bianco Elettra.
- 2.2.1.20 Color Range: Bianco Vittoria.
- 2.2.1.21 Texture: Lux.
- 2.2.1.22 Texture: Satin.
- 2.2.1.23 Texture: Vesuvio.
- 2.2.1.24 Texture: Arena.
- 2.2.1.25 Texture: Lithos.
- 2.2.1.26 Texture: Dune.
- 2.2.1.27 Texture: Velluto.

2.2.2 Standards and Values:

- 2.2.2.1 Absolute Weight, ASTM C97: 154 pounds per cubic foot.
- 2.2.2.2 Water Absorption, ASTM C97: 0.02 percent.
- 2.2.2.3 Flexural Strength, ASTM C880: 5537.9 psi (dry); 5481.00 psi (wet); 6384.6 psi (post 15 cycles of freeze-thaw).
- 2.2.2.4 Breaking Strength, ASTM C648: 1293.5 lbf (12mm), 3051.9 lbf (20mm), 9117.6 lbf (30mm).
- 2.2.2.5 Deep Abrasion Resistance, ASTM C1353: 258 average abrasion index.



- 2.2.2.6 Freeze-Thaw Resistance, ASTM C1026: Unaffected.
- 2.2.2.7 Thermal Shock Resistance Coefficient (Post 20 cycles), EN 14617-6: 0.9 percent.
- 2.2.2.8 Thermal Shock Resistance (Post 10 cycles), ASTM 484: No breakage.
- 2.2.2.9 Impact Resistance, EN 14617-9: 1.97 Joules (1/2 inch thick), 3.3 Joules (3/4 inch thick).
- 2.2.2.10 Resistance to Acids and Bases, EN 14617-10: C4-Resistant.
- 2.2.2.11 Linear Thermal Expansion Coefficient, ASTM C531: 3.01×10^{-6} , per degree F-1
- 2.2.2.12 Dimensional Stability: EN 14617-12: A.
- 2.2.2.13 Fire Resistance: EN 13501-1: A1.
- 2.2.2.14 Combustibility: ASTM E136: Pass, non-combustible.
- 2.2.2.15 Burning Characteristics: ASTM E84: 0 Flame spread index, 5 Smoke developed index.
- 2.2.2.16 Thermal Conductivity, EN ISO 10456: 1,3 W/m degree K.
- 2.2.2.17 Specific Heat: EN ISO 10456: 840 J/kgK.
- 2.2.2.18 Water Vapor Diffusion Resistance: No value (dry), unlimited (wet).
- 2.2.2.19 Non-Slip Properties: ANSI A137.1: Wet DCOF: 0.25(Lux), 0.46(Satin), 0.5(Vesuvio), 0.81(Arena), 0.46(Lithos), 0.42(Dune), , 0.43(Velluto).
- 2.2.2.20 Compressive Strength, ASTM C170: 55420 psi (dry); 26340 psi (wet).
- 2.2.2.21 Color Uniformity: ANSI 137.1/ASTM C609.; V0 – from 0.02 to 0.04 <3 Judds, Pass.
- 2.2.2.22 Capillary Water Absorption, EN 1925: 0,0002 oz/in²s0.5.

2.2.3 Dimensional Tolerances:

- 2.2.3.1 Nominal Thickness 1/2 Inch: -0/+1/32 inch.
- 2.2.3.2 Nominal Thickness: 3/4 Inch: -0/+1/32 inch.
- 2.2.3.3 Nominal Thickness: 1-1/4 inches: -0/+1/64 inch.
- 2.2.3.4 Variation in Structured Surface Thickness: Less than 1/16 inch.
- 2.2.3.5 Flatness, Transversal, 59 Inch Width: Less than or equal to 1/16 inch.
- 2.2.3.6 Flatness, Longitudinal, 132-1/2 Inch Length: Less than or equal to 1/8 inch.

2.2.4 Degrees of Gloss:

- 2.2.4.1 Lux Finish: Greater than 65, same sheet variation less than 10.
- 2.2.4.2 Satin Finish: Less than 16, same sheet variation less than 3.
- 2.2.4.3 Vesuvio Finish: Less than 5, same sheet variation less than 3.
- 2.2.4.4 Arena Finish: Less than 6, same sheet variation less than 3.
- 2.2.4.5 Lithos Finish: Less than 7, same sheet variation less than 3.
- 2.2.4.6 Dune Finish: Less than 8, same sheet variation less than 3.
- 2.2.4.7 Velluto Finish: Less than 16, same sheet variation less than 3.

2.2.5 Tests and Certifications:

- 2.2.5.1 EPD: ISO 14025 and EN 15804.
- 2.2.5.2 LCA: LCA in accordance with EN15804.
- 2.2.5.3 SRI: In accordance with ASTM E 1980-11; ASTM E 903-12; ASTM C 1371-15. Available for different colors and finishes.
- 2.2.5.4 Chemical Emissions: Green Guard Gold.
- 2.2.5.5 Reaction to Fire: EU A1 as per EN 13501-1.
- 2.2.5.6 Environmental Performance: HK-G-PASS Platinum.
- 2.2.5.7 Antibacterial Properties: Compliance in accordance with ISO 22196:2007.



PART 3 - EXECUTION

3.1 EXAMINATION

- 3.1.1 Examine substrates and conditions, with Installer present, for compliance with requirements indicated for conditions affecting performance of the wall system. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- 3.2.1 General: Comply with approved submittals, manufacturer's written instructions and recommendations for installation, and as applicable to project conditions and supporting substrates. Install securely in place, with provisions for thermal and structural movement.
 - 3.2.1.1 Install in configuration as indicated on Drawings.
 - 3.2.1.2 Shim and align system units within installed tolerance to comply with manufacturer's requirements and approved submittals.
 - 3.2.1.3 Replace damaged or defaced units prior to Substantial Completion.

3.3 CLEANING AND PROTECTION

- 3.3.1 Repair or remove and replace defective work as directed on completion of installation.
- 3.3.2 Clean finished surfaces. Remove and replace damaged products or touch up and refinish damaged areas to match original factory finish.
- 3.3.3 Protect installed materials using materials acceptable to the manufacturer until Substantial Completion.

END OF SECTION