

POOL GRATES CSI SPECIFICATIONS

Part 1 GENERAL

1.1 Section Includes:

- A. Pool Grates as shown on drawings and as specified herein.

1.2 Submittals

- A. Submit manufacturer's shop drawings and maintenance instructions.
- B. Manufacturer information:
 - 1. Provide overview literature describing manufacturer's overall scope of products.
 - 2. Provide URL of manufacturer's website; website must provide access to technical data, images and general product information.

1.3 Quality Assurance

- A. Manufacturer Qualifications: Minimum of 20 years of experience in the manufacturing of stone (reinforced) architectural products.
- B. Supporting drawings: Products are supported with complete shop drawings by manufacturer.

1.4 Testing Standard References

- A. SS(Singapore Standards) Testing Standards:
 - 1. SS485:2011 - Specifications for Slip Resistance classification of public pedestrian surface materials.
 - 2. SS245:1995 - Specifications for Water Absorption.
- B. ASTM(American Society for Testing and Materials) Testing Standards:
 - 1. ASTM D543:2014 - Specifications for chemical resistance classification.
 - 2. ASTM B117-11 - Specifications for corrosion test in high-saline environment.

1.5 Sustainability

- A. Provide Green Label certifications from:
 - 1. SEC(Singapore Environment Council)
 - 2. SGBC(Singapore Green Building Council) - Product leader in SGBC product directory - <https://web.sgbc.online/public/product>
- B. Heavy Metals Testing Standards:
 - 1. Heavy Metals Test Analysis - Specifications for testing of hazardous substances.
- C. Toxicity Testing Standards:
 - 1. US EPA 1311 Toxicity Characteristic Leaching Procedure (TCLP) - Specifications for testing of inorganic contaminants.

1.6 Delivery, Storage and Handling

- A. Deliver materials to installation site in manufacturer's original packaging. Handle products in accordance with manufacturer's instructions. Store in clean, dry location until installation.

1.7 Warranty

A. Provide manufacturer's standard warranty.

1. Warranty terms: one year against defects in materials and workmanship.

Part 2 PRODUCT

2.1 Manufacturer

A. Jonite Private Limited
5 Upper Aljunied Link
Quartz Industrial Building #01-01
Singapore 367903
Phone: +65 6383-3788
Fax: +65 6383-3718
Email: info@jonite.com
Website: www.jonite.com

2.2 Pool Grates

A. General

1. Pool grates shall be MODEL _____
2. Size and dimensions to be as specified in shop drawing attached.
3. (Optional) Custom Curve Grates are to match radius and arc segments as shown on plans provided.

2.3 Material

A. Pool grate material shall be stone (reinforced) from at least 30% recycled materials. The material is a 95% agglomeration of natural stone substrates & mineral oxides formed under a high-tech vacuum & compression process. It is a proprietary formulated structural polymer hybrid system of a heterogeneous blend.

2.4 Accessories

- (Optional) L-Trimms- All pool grates to come with supporting L-trimms of matching material and colours.
- (Optional) Stud Trimms- All pool grates to come with supporting Stud Trimms of matching material and colours for additional open drain area.
- (Optional) 90° Corner Grates- All 90° drain corners to come with 90° Corner Pool Grates of matching material and colours.
- (Optional) Grate Tiles- All irregular connections in drains to be covered by Grate Tiles. All Grate Tiles will be cut on site by the installer.

2.5 Finish

- Pool Grates to be supplied in natural stone matte state.
- Colour to be _____
- (Optional) Colour to be customized according to sample submitted to manufacturer.

Part 3 EXECUTION

3.1 Examination

- A. Do not begin installation until site is properly prepared.

3.2 Preparation

- A. Clean surfaces thoroughly prior to installation.

3.3 Installation

- A. Install in accordance with manufacturer's instructions.
- B. Install grates after danger of damage from construction traffic is past.
- C. Install grates after ensuring chlorine levels in pool is optimised.

3.4 Cleaning and Protection

- A. Clean promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials like acid wash that could damage product.
- C. Repair or replace product if damaged.

NOTE: Please note that Options are highlighted in red. Select or delete as desired.

Jonite[®] Stone (reinforced) architectural products are compliant to the general specification & criteria as in accordance:-

Core Material

- A 95% agglomeration of natural stone substrates & mineral oxides formed under a proprietary vacuum & compression process.
- A proprietary formulated structural polymer hybrid system of a heterogeneous blend.

Material Structural & Mechanical Properties

- **Tensile Strength:** 8-25 MPa
- **Compression Strength:** 47.8 Mpa
- **Flexural Strength:** 21.1MPa (ASTM D 790-92)
- **Modulus of Elasticity:** 20 - 40 Gpa
- **Standard Density:** 2.0 - 2.4 kg/dm³
- **Elongation at Rapture:** 3%
- **Thermal Coefficient of Expansion:** 106C-1

Physical Properties

- **Water absorption:** 0.09% (SS245:1995 Appendix F - Water Absorption Test)
- **Slip Resistance:** Achieved Classification V (Very Low notional contribution of the floor surface to the risk of slipping when wet - SS485:2011)
- **Chemical Resistance:** Achieved ASTM D543:2014 - Specifications for Chemical Resistance classification)

Load Class

- Compliant with *BS EN124:2015 - **selected products only*
- Compliant with *BS EN1433:2002 - **selected products only*

Sustainability

- Singapore Green Label certification- (022-016-0270 Eco-Friendly Building Material) from SEC(Singapore Environment Council)
- Singapore Green Building Product certification- Product Leader (SGBP 2019-2728) from SGBC(Singapore Green Building Council)
- USGBC(United States Green Building Council) member satisfies MR Credit 4: Recycled Content under LEED[®]((Leadership in Energy and Environmental Design)
- No heavy metals detected in accordance to Heavy Metals Test Analysis - Specifications for testing of hazardous substances
- No toxic materials detected in accordance to US EPA 1311 Toxicity Characteristic Leaching Procedure (TCLP) - Specifications for testing of inorganic contaminants

Standards & Labels



022-016-0270
Eco-Friendly Building Material



SGBP 2019-2728

