

SECTION 23 13 19.13 – FLOOR DRAINS

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DELETE ALL "SPECIFIER NOTES" WHEN EDITING THIS SECTION.

# GENERAL

## CONDITIONS AND REQUIREMENTS

### The General Conditions, Supplementary Conditions, and Division 01 – General Requirements apply.

## SECTION INCLUDES

## Section 22 13 19.13 – Sanitary Drains, floor drains of the following types:

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SPECIFIER NOTES: DELETE OPTIONS THAT ARE NOT REQUIRED FOR THIS PROJECT.

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### Tile-up Floor Drains.

### Driveway Floor Drains.

### Hinged Floor Drains.

### Classic Floor Drains.

### Modern Floor Drains.

## RELATED SECTIONS

### Section 22 14 26.16 – Facility Area Drains

### Section 22 13 19.13 – Tile Floor and Shower Drains.

### Section 22 13 19.13 – Linear Drains

### Section 22 13 19.13 – Linear and Square Drains

## REFERENCES

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SPECIFIER NOTES: RETAIN ONLY THOSE REFERENCES THAT ARE REQUIRED AFTER THE SECTION IS EDITED

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### Reference Standards

### Americans with Disabilities Act (ADA).

### ASTM International (ASTM):

#### ASTM B117: Standard Practice for Operating Salt Spray (Fog) Apparatus.

#### ASTM C1371: Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.

#### ASTM D543: Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents,

#### ASTM D790: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

#### ASTM E903: Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.

#### ASTM E1980: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces,

#### International Organization for Standardization (ISO):

#### ISO 9001:2015: Quality Management System Certificate Number FS 73051.

#### ISO 14001:2015: Environmental Management System Certificate Number EMS 670579.

#### Singapore Standards (SS):

#### SS485:2011: Specifications for Slip Resistance Classification of Public Pedestrian Surface Materials.

#### SS245:1995: Specifications for Water Absorption.

## SUBMITTALS

### Product Data:

#### Submit manufacturer's shop drawings and maintenance instructions.

#### Manufacturer Information:

#### Provide overview literature describing the manufacturer’s overall scope of products.

#### Provide URL of the manufacturer’s website. The website must provide access to technical data, images, and general product information.

#### Provide manufacturers shop drawings.

#### Provide manufacturer’s guide specifications.

## QUALITY ASSURANCE

### Qualifications:

### Manufacturer: Minimum of 20 years experience in the manufacturing of reinforced stone architectural products.

### Sustainability Standards Certifications.

### LEED: USGBC (United States Green Building Council): MR Credit 4: Recycled Content under LEED® (Leadership in Energy and Environmental Design).

### Singapore Green Building Product Certification: Product Leader (SGBP 2019-2728) from Singapore Environmental Council.

### Singapore Green Label Certification: 022-016-0270 Eco-Friendly Building Material from Singapore Environmental Council.

### United States Environmental Protection Agency: US EPA 1311 Toxicity Characteristic Leaching Procedure (PLCP) – Specifications for testing of inorganic contaminants.

### Heavy Metals Testing Standards: Heavy Metals Test Analysis: Specifications for Testing of Hazardous Substances.

## DELIVERY, STORAGE AND HANDLING

### Delivery: Deliver materials to the installation site in manufacturer’s original packaging.

### Storage:

### Store in a clean, dry location until installation.

### If grates are stored for prolonged periods on-site before use or installation, protect the grates from sunlight and rain.

### Handling:

### Handle products in accordance with the manufacturer’s instructions.

### Use provided lifting hooks for lifting high-performance grates. Care must be taken when lifting and moving grates.

### Grates should not be dropped, thrown, or dragged.

## WARRANTY

* + 1. Manufacturer’s Warranty:
			1. Provide manufacturer’s standard limited warranty in effect at the date of purchase.
				1. Jonite® warrants that the Product is suitable for the purpose for which it was made for a period of one year from the date the commercial invoice and packing list issued by Jonite® is endorsed by the purchaser. For the avoidance of doubt, a purchaser means a person, firm, or corporation, jointly and severally if there is more than one, acquiring the Product from Jonite®.

# PRODUCTS

## MANUFACTURERS

### Specified Manufacturer: Jonite®. Allentown, Pennsylvania. 484-224-2972. Email: info@Jonite®.com. Web: [www.Jonite®.com](http://www.jonite.com).

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SPECIFIER NOTES: DELETE ONE OF THE FOLLOWING TWO PARAGRAPHS.

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### Substitutions: Not Permitted.

### Requests for approved substitutions will be considered in accordance with provisions specified in Section 01 62 00 – Product Options.

## DESCRIPTION

### Jonite® Floor Drains: Floor Drains composed of reinforced stone. These floor drains are designed to achieve a cleaner environment, giving users a more pleasant and hygienic experience. The floor drain cover with waterproof design prevents infiltration by insects and foul air. These drains are specially engineered to provide crucial function while remaining an integral component of the structural floor. Jonite®’s floor drains are available in a wide range of standard colors with color customization options.

### Sustainability: Floor drains composed of at least 30 percent recycled materials.

### Core Materials: 95 percent agglomeration of natural stone substrates and mineral oxides formed under a proprietary vacuum and compression process. Composed of a proprietary structural polymer hybrid system of a heterogeneous blend.

### Physical:

#### Water Absorption: 0.09 percent.

#### Slip Resistance Classification: Very low notational contribution of the floor surface to the risk of slipping when wet.

#### Chemical Resistance: Achieved.

#### Rust and Corrosion: Resistant.

#### Finish: Natural stone matte.

#### Colors: [Ebony black]

### Structural and Mechanical Properties:

#### Tensile Strength: 8 to 25 Megapascal.

#### Compression Strength: 47.8 Megapascal.

#### Flexural Strength: 21.1 Megapascal.

#### Modulus of Elasticity: 20 to 40 Gigapascals.

#### Standard Density: 20 to 2400 Kilograms per cubic meter.

#### Elongation at Rupture: 3 percent.

#### Thermal Coefficient of Expansion: 106C-1.

#### Loading Specifications: 5KN – Strictly for pedestrian application.

### Reference Standards

#### ADA compliant models comply with ADA.

#### Complies with ASTM B117-11: Salt resistance.

#### Complies with ASTM C1371-15: Determination of emittance.

#### Complies with ASTM D543:2014: Chemical resistance.

#### Complies with ASTM D790-92: Flexural properties.

#### Complies with ASTM E903-20: Solar absorptance, reflectance, and transmittance.

#### Complies with ASTM E1980: Solar Reflectance.

#### Complies with ISO 9001: 2015: Quality Management Systems.

#### Complies with ISO 14001:2015: Environmental Management Systems.

#### Complies with: SS245:1995 Appendix F - Water Absorption Test.

#### Complies with: SS485:2011: Slip Resistance.

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SPECIFIER NOTES: COLLECTIONS, MATERIALS, AND PRODUCTS ARE INDICATED IN THE FOLLOWING PARAGRAPHS. OPTIONS WITHIN ARE INDICATED BY SQUARE BRACKETS. DELETE PARAGRAPHS AND OPTIONS NOT REQUIRED FOR THIS PROJECT.

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## TILE-UP FLOOR DRAINS MATERIALS

### Product Description: Tile-Up Floor Drains manufactured by Jonite®: One of our most popular collections amongst interior designers, this collection enables you to use any tile to create a point drain cover with all of Jonite’s floor drain functionalities.

### Product Basis of Design: Tile-Up Floor Drains 71111: FTUS-90/100.

#### Component: Tile-up Trap (Shower Square)

#### Width: 100 millimeters (3.9 inches).

#### Length: 100 millimeters (3.9 inches).

#### Thickness: 22 millimeters (0.9 inches).

### Product Basis of Design: Tile-Up Floor Drains 71110: FTUS-148/158.

#### Component: Tile-up Trap (Square)

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 millimeters (1.2 inches).

## DRIVEWAY FLOOR DRAINS MATERIALS

### Product Description: Driveway Floor Drains manufactured by Jonite®: Created specifically for use in driveway drainage, this collection is available in 2 standard designs.

### Product Basis of Design: Driveway Floor Drains 75110: FHS-158/200HD.

#### Component: Driveway Trap (B125)

#### Width: 200 millimeters (7.9 inches).

#### Length: 200 millimeters (7.9 inches).

#### Thickness: 45 millimeters (1.8 inches).

### Product Basis of Design: Driveway Floor Drains 75111: FHS-158/200HD Blank.

#### Component: Driveway Trap Blank (B125)

#### Width: 200 millimeters (7.9 inches).

#### Length: 200 millimeters (7.9 inches).

#### Thickness: 45 millimeters (1.8 inches).

## HINGED FLOOR DRAINS MATERIALS

### Product Description: Hinged Floor Drains manufactured by Jonite®: Do away with the hassle of handling floor traps; our Hinged Collection is the perfect partner for applications that requires frequent access to the pipes for cleaning.

### Product Basis of Design: Hinged Floor Drains 75113: FHS-125/158.

#### Component: Hinged Trap (Square)

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Hinged Floor Drains 75114: FHS-125/158 Blank.

#### Component: Hinged Trap (Blank)

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Hinged Floor Drains 75115: FHS-125/158 Dome.

#### Component: Hinged Trap Dome

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 or 45 millimeters (1.2 or 1.8 inches).

### Product Basis of Design: Hinged Floor Drains 72110: FHS-125/200.

#### Component: Hinged Trap (Large)

#### Width: 200 millimeters (7.9 inches).

#### Length: 200 millimeters (7.9 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Hinged Floor Drains 72111: FHS-125/200 Blank.

#### Component: Hinged Trap Blank (Large)

#### Width: 200 millimeters (7.9 inches).

#### Length: 200 millimeters (7.9 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Hinged Floor Drains 72112: FHS-125/200 Dome.

#### Component: Hinged Trap Dome (Large)

#### Width: 200 millimeters (7.9 inches).

#### Length: 200 millimeters (7.9 inches).

#### Thickness: 30 or 45 millimeters (1.2 or 1.8 inches).

## CLASSIC FLOOR DRAINS MATERIALS

### Product Description: Classic Floor Drains manufactured by Jonite®: While retaining the features of conventional floor traps, the classic collection is exclusive with the use of Jonite stone, durable yet aesthetically pleasing.

### Product Basis of Design: Classic Floor Drains 73112: FCR90/100 Shower.

#### Component: Classic Shower Trap (Round)

#### Diameter: 100 millimeters (3.9 inches).

#### Thickness: 25 millimeters (1 inch).

### Product Basis of Design: Classic Floor Drains 73111: FCSR-135/158.

#### Component: Classic Square Trap (with Round Cover)

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Classic Floor Drains 73110: FCR145/165.

#### Component: Classic Round Trap

#### Diameter: 165 millimeters (6.5 inches).

#### Thickness: 30 millimeters (1.2 inches).

## MODERN FLOOR DRAINS MATERIALS

### Product Description: Modern Floor Drains manufactured by Jonite®: The modern collection of floor drains complement minimalist designs while retaining its functionality and durability.

### Product Basis of Design: Modern Floor Drains 74110: FMAS – 135/158.

#### Component: Modern Americ Square

#### Width: 158 millimeters (6.2 inches).

#### Length: 158 millimeters (6.2 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Modern Floor Drains 74111: FMAR – 145/165.

#### Component: Modern Americ Round

#### Diameter: 165 millimeters (6.5 inches).

#### Thickness: 30 millimeters (1.2 inches).

### Product Basis of Design: Modern Floor Drains 74112: FMSR – 145/165.

#### Component: Modern Slotted

#### Diameter: 165 millimeters (6.5 inches).

#### Thickness: 30 millimeters (1.2 inches).

## ACCESSORIES

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SPECIFIER NOTES: OPTIONAL ACCESSORIES ARE INDICATED IN THE FOLLOWING PARAGRAPHS. DELETE PARAGRAPHS NOT REQUIRED FOR THIS PROJECT.

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### Maintenance Accessories:

#### Repair Kit: Repair Kit is a proprietary epoxy putty filler for repair of gaps, cracks, and large chips.

#### Colors: [Standard color: \_\_\_\_] or [Custom color].

#### Perform repairs on gaps, cracks, and large chips in accordance with manufacturer’s instructions.

#### SealFix™ 103: A two-part epoxy mortar formulated for fixing Jonite® components such as L-Trimmers™. It has high strength bonding, is impermeable, chemical-resistant, and suitable for dry fixing.

#### Perform repairs on Jonite® components in accordance with manufacturer’s instructions.

#### ArmorFix™ 108: All Jonite® products are impregnated with a coat of ArmorFix™ 108 for protection, strength, and wear resistance.

#### Apply ArmorFix™ 108 in accordance with manufacturer’s instructions.

#### Kleansol™ 511: A proprietary algae and stain removal solution for Jonite® products.

#### Use Kleansol™ 511 in accordance with manufacturer’s instructions.

# EXECUTION

## EXAMINATION

### Examine Project conditions and completed Work and verify that the site is adequately prepared.

### Immediately correct all deficiencies and conditions which would cause improper execution of Work specified in this Section and subsequent Work.

### Proceeding with Work specified in this Section shall be interpreted to mean that all conditions were determined to be acceptable prior to start of Work.

## PREPARATION

### Clean the surface thoroughly before installation.

### Ensure the area is free of dirt and debris.

### Prepare the surface in accordance with manufacturer’s instructions.

## INSTALLATION

### Ensure the installation site is cleaned and prepared.

### Install in accordance with the manufacturer’s instructions and recommendations.

### Install grates after danger of damage from construction traffic is passed.

## CLEANING

### Clean promptly after installation in accordance with the manufacturer’s instructions.

### Clear dust and debris frequently.

### Dislodge dirt and grime with a high-pressure water jet spray.

### Use soap-less cleaners, mild soap, or neutral pH detergent, clean water, and a non-metal scrub brush. Remove stains with Kleansol™ 511. Apply Armorfix™ 108 after the grate is dry.

### Do not use harsh cleaning materials like an acid wash as this can damage the grates.

### Repair or replace the product if damaged.

### PROTECTION

### Protect floor drains in accordance with the manufacturer’s instructions.

### Perform regular visual checks of floor drains. Ensure floor drains are not structurally compromised and there are no visible cracks.

### Do not expose floor drains to:

### Heavy cleaning chemicals.

### Cement.

### Do not use floor drains as structural elements.

### Do not permit floor drains to contact construction debris, masonry, gravel, or organic material.

### Do not wash flooring with chemicals and permit waste to flow through floor drains.

END OF SECTION