



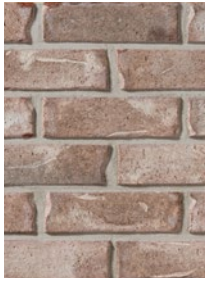
Crossroads Series

Made from warm red clay unique to Indiana, this series is produced at one of North America's most technologically advanced manufacturing facilities. Crossroads Series offers rich tones, various textures and a rugged, tumbled appearance.



STANDARD COLORS

Manufactured in our Farmersburg, Indiana plant. Crossroads Series is not stocked in Canada. Contact a Brampton Brick Sales Representative for more information or for product availability prior to specifying.



BENTON
Sizes: Modular, Queen



CRAWFORD
Sizes: Modular, Queen, Premier Executive



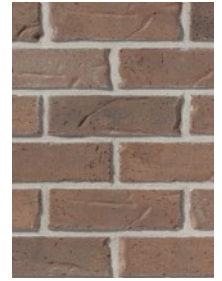
GIBSON
Sizes: Modular, Queen



MARSHALL
Sizes: Modular, Queen, Premier Executive



OLD LAFAYETTE
Sizes: Modular, Queen

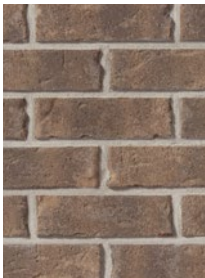


RIPLEY
Sizes: Modular, Queen



SULLIVAN
Sizes: Modular, Queen

PREMIUM COLORS



BROWNSTONE
Sizes: Modular, Queen, Premier Executive



GRAYSTONE
Sizes: Modular, Queen, Premier Executive



WHITESTONE
Sizes: Modular, Queen, Premier Executive

BRICK TEXTURE

Brampton Brick's Crossroads Series is manufactured in a velour texture.

AVAILABLE SIZES



Modular
 Length 194 mm (7 5/8")
 Height 57 mm (2 1/4")
 Depth 92 mm (3 5/8")
 Bricks per square foot 6.8
 Bricks per square meter 73.5



Queen
 Length 194 mm (7 5/8")
 Height 70 mm (2 3/4")
 Depth 70 mm (2 3/4")
 Bricks per square foot 5.7
 Bricks per square meter 61.5



Premier Executive
 Length 257 mm (10 1/8")
 Height 79 mm (3 1/8")
 Depth 70 mm (2 3/4")
 Bricks per square foot 3.9
 Brick per square meter 42

NOTE: Premier Executive is ONLY available in the USA, due to the 70mm bed depth.

Note:

1. To ensure proper construction, please refer to your local Building Code(s), Standards and Industry Best Practices.
2. Limitations to masonry units less than 70mm under the Ontario Building Code (OBC) include, but are not limited to, walls of Masonry Veneer less than 11m high, with unraked joints, that have units individually supported by the structural backing (Reference: Ontario Building Code 9.20.6.4. Masonry Veneer)
3. Brampton Brick Limited is not design responsible.

PACKAGING SPECIFICATIONS

BRAMPTON, ONTARIO PLANT	Weight/Cube (kg)	Weight/Cube (lb)	Weight/Brick (kg)	Weight/Brick (lb)	Bricks/Cube	Bricks/m²	Bricks/ft²
Metric Norman	1,170	2,574	2.5	5.5	468	49.8	4.6
Premier Plus	1,160	2,552	2.5	5.5	464	42.0	3.9
Metric Jumbo	945	2,079	3.5	7.7	270	33.0	3.0
FARMERSBURG, INDIANA PLANT	Weight/Cube (kg)	Weight/Cube (lb)	Weight/Brick (kg)	Weight/Brick (lb)	Bricks/Cube	Bricks/m²	Bricks/ft²
Modular	1,094	2,419	1.9	4.2	576	73.5	6.8
Queen	1,047	2,279	1.7	3.7	616	61.5	5.7
Premier Executive	925	2,040	2.3	5.1	400	42.0	3.9

TYPICAL CLAY BRICK PHYSICAL PROPERTIES

Product Property		CSA	ASTM	Typical Brampton Brick Range	
				Metric Units	Imperial Units
Minimum Compressive Strength	Individual Average of 5	> 17.2 MPa > 20.7 MPa	> 2500 psi > 3000 psi	50 – 85 MPa	7200 – 12000 psi
24 Hour Cold Water Absorption*	Individual Average of 5	< 8.0% -	< 8.0% -	4.0% - 6.0%	
5 Hour Boiling Water Absorption	Individual Average of 5	< 17.0% -	< 20.0% < 17.0%	5.5% - 7.0%	
Saturation (C/B) Ratio*	Individual Average of 5	< 0.78 -	< 0.80 < 0.78	0.70 - 0.85	

Based on CSA A82 for Exterior Grade (EG), Type X and ASTM C216 for Severe Weather (SW), Type FBX

*Standards require conformance to at least one of the two criteria

LEED PROGRAM

Brampton Brick can help maximize the number of LEED credits you wish to achieve by producing a product specific to your design needs. Talk with your local Brampton Brick sales representative to learn how.

CODES & STANDARDS

Canadian Codes & Standards Guide

Canadian Standards Association (CSA)
 Masonry Construction for Buildings: CSA A371
 Fired Masonry Brick made from Clay or Shale: CSA A82
 Connectors for Masonry: CSA A370
 Mortar and Grout for Unit Masonry: CSA A179
 For most current information on Canadian Codes and Standards,
 please visit: www.csa.ca

American Codes & Standards Guide

American Society for Testing and Materials (ASTM)
 Terminology for Clay Products: C43
 Test Methods for Sampling and Testing Brick and Structural Clay Tile: C67
 Standard Specification for Facing Brick (Solid Masonry Units made from Clay or Shale): C216
 Specification for Mortar for Unit Masonry: C270
 Specification for Grout for Masonry: C476
 Standard Specification for Hollow Brick (Hollow Masonry Units made from Clay or Shale): C652
 Concrete Facing Brick ASTM C1634
 Load-bearing Concrete Masonry Units ASTM C90

For most current information on American Codes and Standards,
 please visit: www.astm.org

MANUFACTURING TOLERANCES (CSA A82)

Brampton Brick produces to the FBX vs FBS (X vs S) <https://bit.ly/3vdqPqp>

SPECIFICATION	CATEGORY	TYPE X OR FBX TOLERANCE (mm)	TYPE S OR FBS (SMOOTH) TOLERANCE (mm)	TYPE S OR FBX (ROUGH) TOLERANCE (mm)
Maximum permissible variation from specified dimension	75mm and under	1.5	2.5	2.5
	75 to 100mm	2.5	3.0	3.0
	100 to 150mm	3.0	5.0	5.0
	150 to 200mm	4.0	6.0	6.0
	200 to 300mm	5.5	8.0	8.0
	300 to 400mm	7.0	10.0	10.0
Maximum permissible variation from job lot average dimension	75mm and under	1.5	1.5	2.5
	75 to 100mm	1.5	2.5	3.0
	100 to 150mm	2.5	2.5	5.0
	150 to 200mm	2.5	3.0	6.5
	200 to 300mm	3.0	5.0	8.0
	300 to 400mm	5.0	6.5	9.5
Maximum permissible warpage	200mm and under	1.5	2.5	2.5
	200 to 300mm	2.5	3.0	3.0
	300 to 400mm	3.0	4.0	4.0
Chippage	from edge	up to 5 % of brick = 3.0 to 6.5	up to 10 % of brick = 6.5 to 8.5	up to 15 % of brick = 8.0 to 11.0
	from edge	remaining 95 % of lot = 0 to 3.0	remaining 90 % of lot = 0 to 6.5	remaining 85 % of lot = 0 to 8.0
	from corner	up to 5 % of brick = 6.5 to 9.5	up to 10 % of brick = 9.5 to 13.0	up to 15 % of brick = 13.0 to 19.0
	from corner	remaining 95 % of lot = 0 to 6.5	remaining 90 % of lot = 0 to 9.5	remaining 85 % of lot = 0 to 13.0

INITIAL RATE OF ABSORPTION (IRA)

In this test, the bedding face of the brick is placed in a shallow tray of water for a period of one minute and the amount of water absorbed is calculated as in g/ (min. x 20 000mm²). The IRA is an indication of the potential bond between the brick unit and the mortar. The brick does require a certain absorption range in order to draw the water and cement into the surface voids and create a mechanical bond. If the IRA is too low, the lack of absorption can inhibit bond development. If the absorption is too high, the unit will draw the water out of the mortar too quickly, causing the mortar to lose plasticity and inhibit its strength and the bond development of the mortar. The IRA is an optional test and is not a requirement of the standard because there are more factors on site that can affect the IRA than simply the properties of the brick.

Corrective measures for brick with low IRA and or cold weather may include:

- Using type S mortar or increase amount of lime in mortar
- Keep brick dry and warm prior to installation
- Increase time between laying of the units and tooling

Corrective measures for brick with high IRA or hot weather may include:

- Pre-wet the units and/or keep them in shade prior to laying.
- Use admixtures which increase water retentively. [Ref #1]

SEALANTS & COATINGS

Many people think that putting water repellent on a clay brick masonry wall will help keep out the moisture and prolong the life of it. Sometimes water repellents are applied to address problems of excessive moisture or leakage in the wall. The fact is that a wall designed and constructed using best practice does not need to be treated with water repellent. Walls with excessive moisture issues are best addressed by fixing the root cause of the problem. Putting water repellents on the wall could lead to premature freeze thaw deterioration due to entrapment of the water inside the clay brick masonry, even though many of the repellents on the market today are said to be "breathable". Although water repellents may reduce the surface absorption of moisture due to rain, the cause of deterioration is usually due to moisture sources that build up in the wall.

These sources include:

- Interior moisture, like warm interior air, condensing on a cold wall
- Exterior moisture that enters the wall through poor mortar joints, deteriorated sealants or improper application of moisture control features The entrapment effect is best seen in the graph below. Brick with and without water repellent were submerged in water for 24 hours and then allowed to dry with only their faces exposed. The brick without the water repellent dried twice as fast as the ones with water repellent.

Even though the water repellent did allow the brick to dry, the higher retained moisture content can make the difference in the long-term performance of the masonry wall. The effect of this moisture build up can be quite catastrophic. Brampton Brick does not recommend the use of masonry sealers.

- Water absorbed by the face is released through the face
- They do not seal large cracks or poor mortar joints
- They do not allow water that migrated behind the wall to exit the wall
- They do not replace good design and workmanship [Ref #2]

CLEANING OF NEW MASONRY

It is often necessary to clean new masonry to achieve the desired aesthetics. The first step is for the mason to try and avoid getting mortar smears on the face of the brick. If there are mortar smears, the easiest cleaning method is to use clear water and a brush. This method needs to be carried out within 24 hour, before the mortar has had time to set. If the mortar has set, then cleaning can be achieved by using a proprietary cleaning agent, high pressure water or a combination of both. If either of these methods is used, the cleaning should be carried out between 7 and 30 days of installation. 7 days allows the mortar to gain sufficient strength so that the mortar is not damaged during cleaning. If the mortar is allowed to set for more than 30 days, it becomes progressively more difficult to remove. If a proprietary cleaning agent is used, it is important that the brickwork is prewet so that the cleaning agent remains on the surface of the brickwork where it is most effective. Check with your brick manufacturer for recommendations on what cleaner is best suited for their product. If high pressure water is used, then the pressure should not exceed 4850 kPa (700 psi) at a 2 ft. minimum distance. Also use a fan nozzle with a spray angle of at least 60°. Use gentle strokes. As with all masonry cleaning projects, it is important to carry out the cleaning on an inconspicuous area of brickwork first to ensure that the desired results are achieved. Allow a day or two for the brickwork to dry before inspection. If the desired are achieved, proceed with cleaning the rest of the brickwork. For more information on cleaning of masonry, see BIA Technical Note 20. [Ref #3]

MANUFACTURING LOCATIONS

BramptonBrick.com

1.800.GO.BRICK (462.7425) (Canada)
1.844.GO.BRICK (462.7425) (USA)

Brampton

225 Wanless Drive
 Brampton, ON L7A 1E9

Boisbriand

4200, Marcel-Lacasse
 Boisbriand, QC J7H 1N3

Brockville

3007 County Rd. #29
 PO Box 141, Brockville, ON K6V 5V2

Cambridge

1038 Rife Road
 Cambridge, ON N1R 5S3

Hillsdale

2108 Flos Road Four East,
 Hillsdale, ON L0L 1V0

Markham

455 Rodick Road
 Markham, ON L6G 1B2

Detroit

51744 Pontiac Trail
 Wixom, MI 48393

Farmersburg

1256 East County Rd. 950 N.
 Farmersburg, IN 47850

References:

[1] "Initial Rate of Absorption (IRA)", Technical Notes, Pg 27. Clay Brick Association of Canada, PO Box 248 Burlington ON

[2] "Use of Water Proofing Sealers", Technical Notes, Pg 8. Clay Brick Association of Canada, PO Box 248 Burlington ON

[3] "Cleaning of New Masonry", Technical Notes, Pg 21. Clay Brick Association of Canada, PO Box 248 Burlington O