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VAR-1021

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Reissued 07/2016
This report is subject to renewal 07/2018.

DIVISION: 22 00 00—PLUMBING
SECTION: 22 13 16—SANITARY WASTE AND VENT PIPING

REPORT HOLDER:

CHARLOTTE PIPE AND FOUNDRY COMPANY

**POST OFFICE BOX 35430
CHARLOTTE, NORTH CAROLINA 28208**

EVALUATION SUBJECT:

CAST IRON PIPE AND FITTINGS



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ICC-ES VAR Environmental Report

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DIVISION: 22 00 00—PLUMBING
Section: 22 13 16—Sanitary Waste and Vent Piping

REPORT HOLDER:

CHARLOTTE PIPE AND FOUNDRY COMPANY
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(704) 332-2647
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EVALUATION SUBJECT:**CAST IRON SOIL PIPE AND FITTINGS****1.0 EVALUATION SCOPE****Compliance with the following evaluation guideline:**

- ICC-ES Evaluation Guideline for Determination of Recycled Content of Materials (EG101), dated March 2012.

Compliance eligibility with the applicable sections of the following green building rating systems, standards and codes:

- 2012 International Green Construction Code (IgCC), (see Table 2 for details)
- 2010 California Green Building Standards Code (CALGreen), Title 24, Part 11 (see Table 3 for details)
- National Green Building Standard (ICC 700-2008) (see Table 4 for details)
- LEED for Homes 2008 (see Table 5 for details)
- LEED 2009 for New Construction and Major Renovations (see Table 6 for details)
- LEED 2009 for Schools New Construction and Major Renovations (see Table 7 for details)
- ANSI/GBI 01-2010—Green Building Assessment Protocol for Commercial Buildings (see Table 8 for details)
- CSI GreenFormat™ (see Table 9 for details)

2.0 USES

The products are used for drain waste and vent soil pipe and fittings in the plumbing industry.

3.0 DESCRIPTION

The products are grey cast iron pipe and fittings produced in a variety of sizes and shapes.

4.0 CONDITIONS**4.1 Code Compliance:**

See ICC-ES listings [PMG-1082](#) and [PMG-1083](#) for compliance with code requirements.

4.2 Green Codes, Standards and Rating Systems Eligibility:

The information presented in Tables 2 through 9 of this report provides a matrix of areas of evaluation and corresponding limitations and/or additional project-specific requirements, and offers benefits to individuals who are assessing eligibility for credits or points.

The final interpretation of the specific requirements of the respective green building rating system and/or standard rests with the developer of that specific rating system or standard or the authority having jurisdiction (AHJ), as applicable.

Compliance for items noted as “Verified Attribute” is subject to any conditions noted in the tables. Decisions on compliance for those items noted as “Eligible for Points” in Tables 2 through 9 rest with the user of this report, and those items are subject to the conditions noted. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. Rating systems or standards often provide supplemental information as guidance.

The total percentage of recycled content reported is based upon assigning an equal value for each type of recycled content used in accordance with IgCC Section 505.2.2, ICC 700 Section 604.1 and ANSI/GBI 01-2010 Section 10.1.2. Where the recycled content values are used for determination of compliance with requirements other than the IgCC, ICC 700 and ANSI/GBI 01, the total percent of recycled content must be calculated in accordance with the percentage requirements stated in that document.

Due to the variability of costs and volume, the recycled content percentage listed in this report is based upon weight (mass). The use of cost or volume as the method for calculation is outside the scope of this report.

5.0 BASIS OF EVALUATION

The information in this report, including the “Verified Attribute,” is based upon the following supporting documentation:

ICC-ES EG101 (Evaluation applies to IgCC Section 505.2.2; CALGreen Sections A4.505.3 and A5.405.4; ICC 700 Section 604.1; LEED Homes MR Credit 2.2; LEED NC MR Credit 4; LEED Schools MR Credit 4; ANSI/GBI 01 Section 10.1.2.1 and 10.2.2.1; CSI GreenFormat Section 2.3.3)

6.0 IDENTIFICATION

Charlotte Pipe and Foundry Company products are identified with the country of origin and the manufacturer's initials or registered trademark. The report subjects are

also identified on the product and/or packaging with the VAR Environmental Report number (VAR-1021).

TABLE 1—RECYCLED CONTENT BY WEIGHT SUMMARY

PRODUCT DESCRIPTION	RECYCLED MATERIALS	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% IN-PROCESS RECYCLED CONTENT—TREATED	% TOTAL RECYCLED CONTENT
Cast iron pipe and fittings	Iron	0	84.80	0	95.81
	Steel	0.22	10.79	0	

TABLES 2 THROUGH 9

Section Number	Section Intent	Possible Points	Conditions of Use to Qualify for Points	Pipe and Fittings
TABLE 2—SUMMARY OF AREAS OF ELIGIBILITY WITH 2012 INTERNATIONAL GREEN BUILDING CODE				
505.2.2	Recycled content building materials	N/A	Recycled content building materials shall comply with one of the following: 1. Contain not less than 25 percent combined post-consumer and pre-consumer recovered material, and shall comply with section 505.2.3 2. Contain not less than 50 percent combined post-consumer and pre-consumer recovered material	●
TABLE 3—SUMMARY OF AREAS OF ELIGIBILITY WITH 2010 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)				
A4.405.3 A5.405.4	Recycled content	Elective	To achieve Tier 1 - Use materials, equivalent in performance to virgin materials, with a postconsumer or preconsumer recycled content value (RCV) for a minimum of 10% of the total value, based on estimated cost of materials on the project. To achieve Tier 2 - Use materials, equivalent in performance to virgin materials, with a postconsumer or preconsumer recycled content value (RCV) for a minimum of 15% of the total value, based on estimated cost of materials on the project. RCV shall be determined as follows: RCV = (% PC x material cost) + 0.5 (% PI x material cost) Notes: 1. PC means post consumer waste. 2. PI means post industrial waste.	●
TABLE 4—SUMMARY OF AREAS OF ELIGIBILITY WITH THE NATIONAL GREEN BUILDING STANDARD (ICC 700-2008)				
604.1	Use two or more major and/or minor building materials containing recycled content	2 6 max	2, 4 or 6 points may be earned when products are used with another major building component with recycled content of 25% < 50%; 50% < 75%; ≥ 75%, respectively.	●
TABLE 5—SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED FOR HOMES				
MR 2.2	Recycled content	0.5	To earn 0.5 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 the post industrial (preconsumer) content constitutes a minimum total recycled content of 25%.	●
TABLE 6—SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATION				
MR4	Recycled content	1 2 max	To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at east 10%, based on the cost, of the total value of the materials in the project. To earn 2 points use 20% or more.	●
TABLE 7—SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED 2009 FOR SCHOOLS NEW CONSTRUCTION AND MAJOR RENOVATION				
MR4	Recycled content	1 2 max	To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at east 10%, based on the cost, of the total value of the materials in the project. To earn 2 points use 20% or more.	●
TABLE 8—SUMMARY OF AREAS OF ELIGIBILITY WITH ANSI/GBI 01-2010 – GREEN BUILDING ASSESSMENT PROTOCOL FOR COMMERCIAL BUILDINGS				
10.1.2.1	Materials content - Assemblies	1 8 max	Recycled post-consumer or post-industrial (pre-consumer) content materials accounted for 1% to 20% or more of building materials. Percentage is calculated as 100 x A (total cost or weight of recycled content materials) ÷ B (total cost or weight of all building materials)	●
TABLE 9— SUMMARY OF AREA OF ELIGIBILITY WITH CSI GREENFORMAT™				
2.3.3	Recycled content	N/A	This category relates to LEED rating system points. For specifics, see the GreenFormat-LEED Relationships Table .	●
●	= Verified attribute			