

BASALITE CONCRETE PRODUCTS

ENVIRONMENTAL PRODUCT DECLARATION

Mix SA14 • Surrey Plant



This Environmental Product Declaration (EPD) reports the impacts for 1 m³ of concrete formed into manufactured concrete and masonry products meeting the following specifications:

- ASTM C90 Load Bearing Concrete Masonry Units
- CSA A165.2 Load Bearing Concrete Masonry Units

PRODUCT DESCRIPTION

SA14 4218 CAP:

A standard Basalite cap. Sizes, shapes and colors are available for site walls. Minimum compressive strength 20 MPA



OPERATOR

EarthSure

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<http://iere.org/programs/earthsure/>



DATE OF ISSUE

09/15/2016 (valid for 5 years until 09/15/2021)

ENVIRONMENTAL IMPACTS

Declared Product:

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Declared Unit: 1 m³ of concrete formed into manufactured concrete masonry product (CMU).

Global Warming Potential (kg CO ₂ -eq)	459
Acidification Potential (kg SO ₂ -eq)	2.75
Eutrophication Potential (kg N-eq)	0.27
Smog Creation Potential (kg O ₃ -eq)	36.3
Ozone Depletion Potential (kg CFC-11-eq)	1.1E-5
Total Primary Energy Consumption	
Non-Renewable Fossil (MJ)	3,223
Non-Renewable Nuclear (MJ)	238
Renewable (Biomass) (MJ)	330
Renewable (Wind, Solar, Geothermal) (MJ)	11.0
Material Resource Consumption	
Non-Renewable Material Resources (kg)	2,310
Renewable Material Resources (kg)	18.3
Net Fresh Water (l)	4,870
Non-Hazardous Waste Generated (kg)	12.5
Hazardous waste generated (kg)	5.67
Reclaimed Concrete Masonry Products (kg)	0.0E+0

Material Composition: natural aggregate, Portland cement, batch water, admixture.

The ASTM International PCR005: Product Category rules for Preparing an Environmental Product Declaration for Manufactured concrete and Concrete Masonry Products issued December 2014 serves as the PCR for this EPD. <http://www.astm.org>

PCR review was chaired by: thinkstep – Formally PE International • info@thinkstep.com.
The PCR peer review report is available upon request: cert@astm.org

Independent verification of the declaration, according to ISO 14025:2006: internal external

Third party verifier: Rita Schenck (rita@iere.org) • Institute for Environmental Research and Education (<http://iere.org>)

LCA and EPD developer: Laurel McEwen (laurel.mcewen@climateearth.com) • Climate Earth (<http://www.climateearth.com>)

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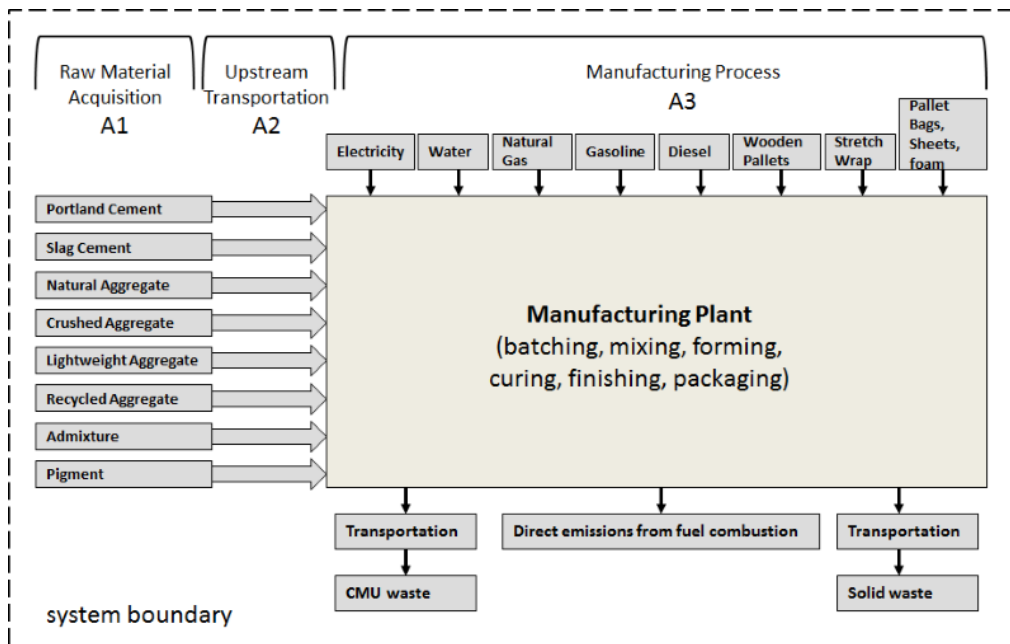


STUDY

The impact results are based on a cradle-to-gate life cycle assessment (LCA) study covering the following phases of the life cycle:

- A1 - raw material acquisition;
- A2 - upstream transportation; and
- A3 - manufacturing processes.

A flow diagram illustrating the main unit processes by life cycle stage is provided below.



The following cradle-to-gate life cycle stages are excluded from the primary product stages:

1. Production, manufacture, and construction of manufacturing capital goods and infrastructure.
2. Production and manufacture of production equipment, delivery vehicles, and laboratory equipment.
3. Personnel-related activities (travel, furniture, office supplies).
4. Energy and water use related to company management and sales activities that may be located either within the factory site or at another location.

For more information contact: Conrad James Director, Environmental Management Systems conrad.james@paccoast.com

This EPD covers only the cradle-to-gate impacts of manufactured concrete masonry products using a declared unit. EPD's using the same PCR, calculation engine and covering the same life cycle phases can be used to assist users in making informed comparisons between products. During the use phase, concrete carbonates and absorbs CO₂. End of life treatment (dispose, recycle, reuse) can have a significant effect on the life cycle impacts of concrete masonry products.

This EPD is intended for Business-to-Business communication.

