

<b>Product name:</b>	Komponent®
<b>Description:</b>	Shrinkage-compensating cement additive
<b>Declared unit:</b>	1 tonne of cement product



Acronym	Life Cycle Impact Metrics	Unit	Value
PCOP	Photochemical oxidation potential	kg NO <sub>x</sub> -eq	0.332
ODP	Ozone layer depletion potential	kg CFC-11-eq	0.0000193
GWP	Global warming potential	kg CO <sub>2</sub> -eq	461
EP	Eutrophication potential	kg N	0.0394
AP	Acidification potential	moles of H <sup>+</sup> -eq	41.8

Acronym	Life Cycle Inventory Metrics	Unit	Value
WDP	Water depletion potential	m <sup>3</sup>	0.344
TPE	Total primary energy	MJ-eq	2,250
RR	Renewable resources	m <sup>3</sup>	0.000661
RE	Renewable energy	MJ-eq	99.3
NRR	Non-renewable resources	kg	91.9
NRE	Non-renewable energy	MJ-eq	2,140
LFW	Landfill bulk waste	kg waste	39.2
LFHW	Landfill hazardous waste	kg waste	0.00338
ADP <sub>f</sub>	Abiotic depletion-fossil fuel	MJ, net calorific value	2,040
ADP <sub>e</sub>	Abiotic depletion-elements	kg Sb-eq	0.0149

## SYSTEM BOUNDARY – Life Cycle Scope Considered:

### A1 - A3 PRODUCT STAGE



A1 RAW MATERIAL SUPPLY  
A2 TRANSPORT  
A3 MANUFACTURING

### A4 - A5 INSTALLATION PROCESS STAGE

A4 TRANSPORT TO SITE  
A5 INSTALLATION PROCESS

Not Defined

### B1 - B7 USE STAGE

B1 USE  
B2 MAINTENANCE  
B3 REPAIR  
B4 REPLACEMENT  
B5 REFURBISHMENT  
B6 OPERATIONAL ENERGY USE  
B7 OPERATIONAL WATER USE

Not Defined

### C1 - C4 END OF LIFE STAGE

C1 DE-INSTALLATION/  
DEMOLITION  
C2 TRANSPORT  
C3 WASTE PROCESSING  
C4 DISPOSAL OF WASTE

Not Defined



<b>Declared Product:</b>	<b>This environmental product declaration (EPD) covers cement products produced by CTS Cement Manufacturing Corp. Declared unit: 1 tonne of cement product</b>
<b>Declaration Owner:</b>	CTS Cement Manufacturing Corp. 12442 Knott St. Garden Grove, CA 92841 www.ctscement.com
<b>Program Operator:</b>	Labeling Sustainability 11670 W. Sunset Blvd. Los Angeles, CA 90064 www.labelingsustainability.com
<b>Product Category Rule (PCR):</b>	Core Product Category Rule (PCR) ISO 21930:2017: Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services; Subcategory PCR (used only as guidance document) NSF International (March 2020). PCR for ISO 14025 Type III EPD of Portland, Blended, Masonry, Mortar, and Plastic (Stucco) Cements. Valid through March 31, 2025.  Subcategory PCR Program Operator: NSF International  Subcategory PCR Review Conducted By: <ul style="list-style-type: none"> <li>• Jack Geilbig, EcoForm, 2624 Abelia Way, Suite 611, Knoxville, TN 37931; jgeilbig@ecoform.com</li> <li>• Thomas Gloria, Industrial Ecology Consultants, 35 Bracebridge Road, Newton, MA 02459-1728; t.gloria@industrial-ecology.com</li> <li>• Bill Stough, Sustainable Research Group, P.O. Box 1684, Grand Rapids, MI 49501-1684; bstough@sustainableresearchgroup.com</li> </ul>
<b>Independent Verifier:</b>	Life cycle assessment (LCA) independently reviewed in accordance with ISO 14044 and referenced PCR.  EPD independently verified in accordance with ISO 14025:2006  <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External  Third-Party Verifier: Geoffrey Guest, certified under Labeling Sustainability (www.labelingsustainability.com), CSA Group (www.csaregistries.ca)
<b>Date of Issue:</b>	Jan. 11, 2023
<b>Period of Validity:</b>	5 years (valid until Jan. 12, 2028)
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