

Statement of Verification

BREG EN EPD No.: 000256

Issue 1

BRE/Global

EPD

erified

This is to verify that the

Environmental Product Declaration

provided by:

Altro Ltd

is in accordance with the requirements of:

EN 15804:2012+A1:2013

and

BRE Global Scheme Document SD207

This declaration is for:

Altro Stronghold 30, 3mm

Company Address

Works Road Letchworth Garden City Hertforshire SG6 1NW United Kingdom



Signed for BRE Global Ltd

09 March 2019

Operator

Date of First Issue



09 March 2019

Date of this Issue

08 March 2024

Expiry Date



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Environmental Product Declaration

EPD Number: 000256

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2013 Product Category Rules for Type III environmental product declaration of construction products to EN 15804:2012+A1:2013
Commissioner of LCA study	LCA consultant/Tool
Altro Ltd Works Road Letchworth Garden City Hertfordshire SG6 1NW United Kingdom	Fei Zhang / BRE LINA v2.0
Declared/Functional Unit	Applicability/Coverage
Deciared/Functional Offit	Applicability/Coverage
1m ² of PVC flooring	Manufacturer specific single product
1m ² of PVC flooring	Manufacturer specific single product
1m ² of PVC flooring EPD Type Cradle to Gate	Manufacturer specific single product Background database
1m² of PVC flooring EPD Type Cradle to Gate Demonstra	Manufacturer specific single product Background database ecoinvent v3.2
1m² of PVC flooring EPD Type Cradle to Gate Demonstra CEN standard EN 18	Manufacturer specific single product Background database ecoinvent v3.2 ation of Verification

a: Product category rules

Comparability

Nigel Jones

Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A1:2013. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A1:2013 for further guidance

b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)



Information modules covered

	Product			ruction	Pol	Use stage Related to the building febrie Related to					End-of-life			Benefits and loads beyond the system		
					Related to the building fabric					uilding				boundary		
A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	C3	C4	D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, Recovery and/or Recycling potential
V	V	V														

Note: Ticks indicate the Information Modules declared.

Manufacturing site

Altro Ltd Works Road Letchworth Garden City Hertfordshire SG6 1NW	Click here to enter address.
United Kingdom	

Construction Product

Product Description

Altro Stronghold 30 is 3.0 mm thick sheet PVC based Standard Safety Flooring without PUR Lacquer, to EN 13845, for specific use in kitchens.

Technical Information

The below table covers the basic technical properties of the Altro Stronghold 30 product. For further properties, please see the product's page on Altro's website https://www.altro.co.uk/Altro-Stronghold.

Property	Value, Unit
Thickness (EN 428)	3 mm
Mass per area (EN 430)	3.9 kg/m ²
Slip resistance (TRRL) (EN 13845) (EN 13893) (DIN 51130)	≥ 55 ESf DS R12
Fire performance (EN 13501-1, EN ISO 9239-1, EN ISO 11925-2) CAN/ULC ASTM E648 ASTM E662	Class Bfl-s1, ≥8kW/m², pass S102.2 (Tested) Class 1 <450



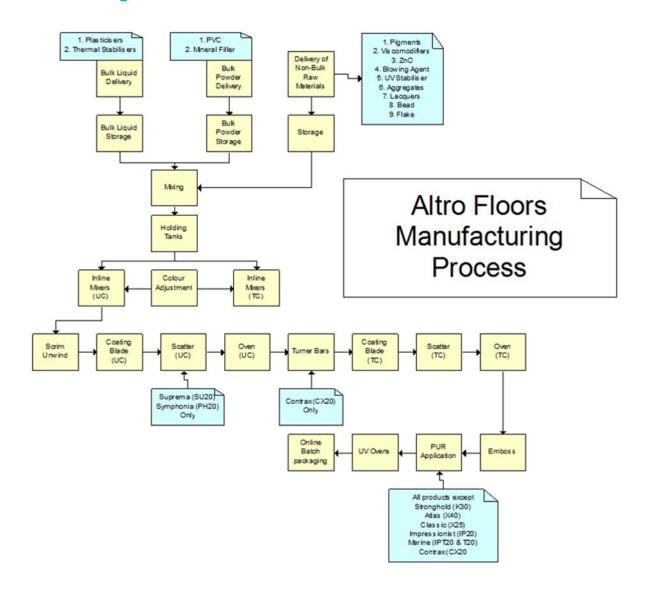
Main Product Contents

Material/Chemical Input	Mass (%)
Plastisol	94
Scatter	5
Scrim	1

Manufacturing Process

Bulk liquids, powders, performance additives and some aggregates are mixed together into a plastisol and placed in a holding tank. The plastisol is then pigmented and passed into inline mixers. The plastisol is then coated onto a scrim and aggregates are scattered onto the surface to aid slip resistance and durability. The product is then cured in an oven and is then cut into rolls and packaged for dispatch.

Process flow diagram





Life Cycle Assessment Calculation Rules

Declared / Functional unit description

1m² of Altro Stronghold 30 3mm thick Altro standard safety flooring without PUR lacquer

System boundary

This is a cradle-to-gate EPD, reporting all production life cycle stages (modules A1 to A3) in accordance with EN 15804:2012+A1:2013.

Data sources, quality and allocation

The supporting LCA study was carried out using BRE LINA v2.0 using manufacturer specific data provided by Altro for the production period of the 12 months of 2017 at the Letchworth site.

The Letchworth site produces other PVC products in addition to the Altro Stronghold 30 product so allocation was applied to site wide values for packaging, energy, water, non-production waste, and wastewater, on a m² of production basis. Production waste was allocated on a percentage mass of production basis. No allocation of raw material inputs was required as total raw material usage for all Altro Stronghold 30 products made over the production period was used.

Secondary data has been drawn from the BRE LINA database v2.0.31 and the background LCI datasets are based on ecoinvent v3.2.

Cut-off criteria

No inputs or outputs have been excluded. All raw materials and packaging inputs, plus their transport, process and general energy and water use, production and non-production waste, have been included, except for direct emissions to air, water and soil, which are not measured.

LCA Results

Results per declared unit (1m²) of this 3mm thick Altro Stronghold 30 standard safety flooring without PUR lacquer, for the declared modules can be found in the following tables.

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts											
			GWP	ODP	AP	EP	POCP	ADPE	ADPF		
	kg CO ₂ equiv.	kg CFC 11 equiv.	kg SO ₂ equiv.	kg (PO ₄) ³⁻ equiv.	kg C₂H₄ equiv.	kg Sb equiv.	MJ, net calorific value.				
	Raw material supply	A1	AGG	AGG	AGG	AGG	AGG	AGG	AGG		
Product stage	Transport	A2	AGG	AGG	AGG	AGG	AGG	AGG	AGG		
Product stage	Manufacturing	A3	AGG	AGG	AGG	AGG	AGG	AGG	AGG		
	Total (of product stage)	A1-3	8.58	5.99e-7	0.0401	0.0137	9.40e-3	4.86e-5	188		

GWP = Global Warming Potential;

ODP = Ozone Depletion Potential;

AP = Acidification Potential for Soil and Water;

EP = Eutrophication Potential;

POCP = Formation potential of tropospheric Ozone;

ADPE = Abiotic Depletion Potential – Elements;

ADPF = Abiotic Depletion Potential – Fossil Fuels.



Parameters describing resource use, primary energy											
			PERE	PERM	PERT	PENRE	PENRM	PENRT			
			MJ	MJ	MJ	MJ	MJ	MJ			
	Raw material supply	A1	AGG	AGG	AGG	AGG	AGG	AGG			
Draduat ataga	Transport	A2	AGG	AGG	AGG	AGG	AGG	AGG			
Product stage	Manufacturing	А3	AGG	AGG	AGG	AGG	AGG	AGG			
	Total (of product stage)	A1-3	20.6	2.12e-4	20.6	217	0	217			

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;

PERM = Use of renewable primary energy resources used as raw materials;

PERT = Total use of renewable primary energy resources;

PENRE = Use of non-renewable primary energy excluding nonrenewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials;

PENRT = Total use of non-renewable primary energy resource

Parameters describing resource use, secondary materials and fuels, use of water										
			SM	RSF	NRSF	FW				
			kg	MJ net calorific value	MJ net calorific value	m³				
	Raw material supply	A1	AGG	AGG	AGG	AGG				
Draduat ataga	Transport	A2	AGG	AGG	AGG	AGG				
Product stage	Manufacturing	A3	AGG	AGG	AGG	AGG				
	Total (of product stage)	A1-3	0	0	0	0.622				

SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water.

Other environmental information describing waste categories										
			HWD	NHWD	RWD					
			kg	kg	kg					
	Raw material supply	A1	AGG	AGG	AGG					
Deceluat atoms	Transport	A2	AGG	AGG	AGG					
Product stage	Manufacturing	A3	AGG	AGG	AGG					
	Total (of product stage)	A1-3	0.388	0.612	2.93e-4					

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed;

RWD = Radioactive waste disposed.



LCA Results (continued)

Other environmental information describing output flows – at end of life										
			CRU	MFR	MER	EE				
			kg	kg	kg	MJ per energy carrier				
	Raw material supply	A1	AGG	AGG	AGG	AGG				
Droduct stage	Transport	A2	AGG	AGG	AGG	AGG				
Product stage	Manufacturing	A3	AGG	AGG	AGG	AGG				
	Total (of product stage)	A1-3	0	0.200	0.0945	0				

CRU = Components for reuse; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy.

References

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ASTM E648, Test for Surface Burning Characteristics of Building Materials.