

Statement of Verification

BREG EN EPD No.: 000253

Issue 03

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 Clear Coat Floor Products, 2mm

Company Address

Works Road
Letchworth Garden City
Hertfordshire
SG6 1NW
United Kingdom



Signed for BRE Global Ltd

Emma Baker
Operator

27 February 2024
Date of this Issue

09 March 2019
Date of First Issue

25 August 2024
Expiry Date



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Environmental Product Declaration

EPD Number: 000253

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 |
| 1m ² of PVC flooring | Manufacturer specific product range |
| EPD Type | Background database |
| Cradle to Gate | ecoinvent v3.2 |
| Demonstration of Verification | |
| CEN standard EN 15804 serves as the core PCR ^a | |
| Independent verification of the declaration and data according to EN ISO 14025:2010 <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External | |
| (Where appropriate ^b) Third party verifier: Nigel Jones | |
| a: Product category rules b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4) | |
| Comparability | |
| 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 | |

Information modules covered

| Product | | | Construction | | Use stage | | | | | | | End-of-life | | | | Benefits and loads beyond the system boundary |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-----------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|---|
| | | | | | Related to the building fabric | | | | | Related to the building | | | | | | |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | 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 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Note: Ticks indicate the Information Modules declared.

Manufacturing site

Altro Ltd
Works Road
Letchworth Garden City
Hertfordshire
SG6 1NW
United Kingdom

Construction Product

Product Description

Altro clear coat products are 2mm sheet PVC based safety flooring to (EN 13845) both with a clear coat. This product range representative EPD covers the products **Altro Suprema** and **Altro Symphonia**.

Technical Information

The below table covers the basic technical properties of the Altro Suprema and Altro Symphonia products. For further properties, please see the products' pages on Altro's website: <https://www.altro.co.uk/Altro-Suprema> and <https://www.altrofloors.com/Floors/Smooth-floors/Altro-Symphonia>.

| Property | Value, Unit |
|--|---|
| Thickness (EN 428) | 2 mm |
| Mass per area (EN 430) | 2.5 kg/m ² |
| Slip resistance (Altro Suprema product only) (TRRL) (EN 13845) (EN 13893) (DIN 51130) | ≥36*, ≥40* ESf DS R10 |
| Fire performance (EN 13501-1, EN ISO 9239-1, EN ISO 11925-2) CAN/ULC ASTM E648 ASTM E662 | Class Bfl-s1, ≥8kW/m ² , pass S102.2 (Tested) Class 1 <450 |

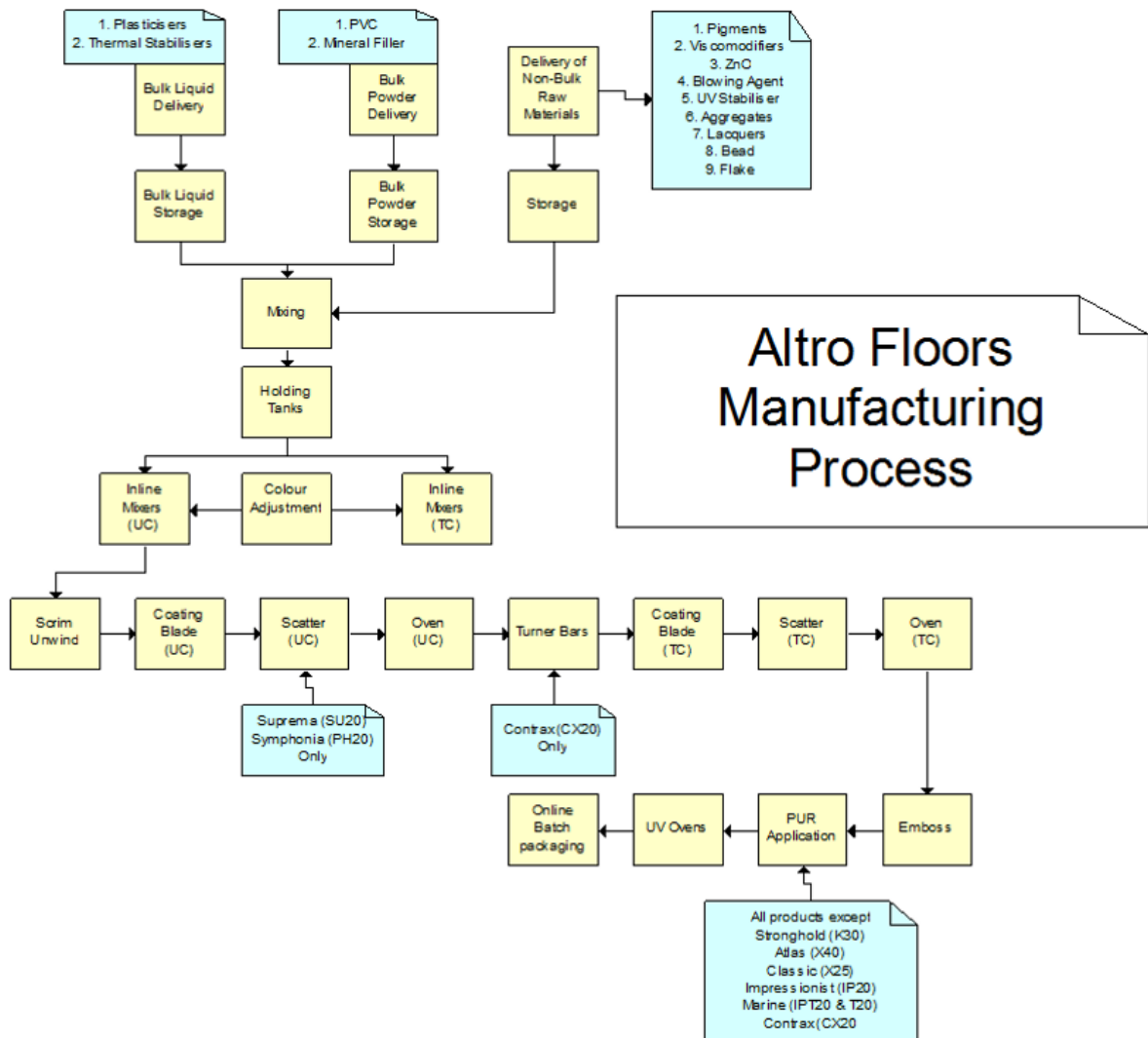
Main Product Contents

| Material/Chemical Input | Mass (%) |
|-------------------------|----------|
| Plastisol | 90 - 91 |
| Scatter | 6 - 7 |
| Scrim | 2 |
| Lacquer | 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 PUR added for enhanced cleanability. The product is then cut into rolls and packaged for dispatch.

Process flow diagram



Life Cycle Assessment Calculation Rules

Declared / Functional unit description

1m² of 2mm thick Altro clear coat PVC flooring products. The declared unit represents both Altro Suprema and Altro Symphonia 2mm thick products.

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 Suprema and Altro Symphonia products, 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 Suprema and Altro Symphonia products made over the production period was used. The weighted average of the results of the two individually modelled products within the product range have been used on this EPD to represent the Altro clear coat PVC product range of 2mm thickness.

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

The results per declared unit (1m²) of the weighted average results of the Altro Suprema and Altro Symphonia products for the declared modules can be found in the following tables and can be considered to represent the 2mm thick Altro clear coat product range.

(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 C ₂ H ₄ equiv. | kg Sb equiv. | MJ, net calorific value. |
| Product stage | Raw material supply | A1 | AGG | AGG | AGG | AGG | AGG | AGG | AGG |
| | Transport | A2 | AGG | AGG | AGG | AGG | AGG | AGG | AGG |
| | Manufacturing | A3 | AGG | AGG | AGG | AGG | AGG | AGG | AGG |
| | Total (of product stage) | A1-3 | 5.43 | 4.24e-7 | 0.0274 | 9.16e-3 | 6.10e-3 | 3.76e-5 | 124 |

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.

LCA Results (continued)

| Parameters describing resource use, primary energy | | | PERE | PERM | PERT | PENRE | PENRM | PENRT |
|--|--------------------------|------|------|---------|------|-------|-------|-------|
| | | | MJ | MJ | MJ | MJ | MJ | MJ |
| Product stage | Raw material supply | A1 | AGG | AGG | AGG | AGG | AGG | AGG |
| | Transport | A2 | AGG | AGG | AGG | AGG | AGG | AGG |
| | Manufacturing | A3 | AGG | AGG | AGG | AGG | AGG | AGG |
| | Total (of product stage) | A1-3 | 19.7 | 1.99e-4 | 19.7 | 143 | 0 | 143 |

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 non-renewable 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 | m ³ |
| Product stage | Raw material supply | A1 | AGG | AGG | AGG | AGG |
| | Transport | A2 | AGG | AGG | AGG | AGG |
| | Manufacturing | A3 | AGG | AGG | AGG | AGG |
| | Total (of product stage) | A1-3 | 0 | 0 | 0 | 0.457 |

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 |
| Product stage | Raw material supply | A1 | AGG | AGG | AGG |
| | Transport | A2 | AGG | AGG | AGG |
| | Manufacturing | A3 | AGG | AGG | AGG |
| | Total (of product stage) | A1-3 | 0.256 | 0.209 | 1.82e-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 |
| Product stage | Raw material supply | A1 | AGG | AGG | AGG | AGG |
| | Transport | A2 | AGG | AGG | AGG | AGG |
| | Manufacturing | A3 | AGG | AGG | AGG | AGG |
| | Total (of product stage) | A1-3 | 0 | 0.133 | 0.0945 | 0 |

CRU = Components for reuse;
MFR = Materials for recycling;

MER = Materials for energy recovery;
EE = Exported energy.

References

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- CAN/ULC-S102.2, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies. Standards Council of Canada / Conseil canadien des normes.
- ASTM E648, Test for Surface Burning Characteristics of Building Materials.