Worth doing, worth Dulux.

Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for :
Dulux® envirO_2™ Interior Matt from **Dulux Australia**

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	EPD Australasia, www.epd-australasia.com
Type of EPD:	EPD of a single product from a manufacturer
EPD registration number:	EPD-IES-0025876:001
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AUSTRALASIA EPD® INTERNATIONAL EPD SYSTEM

EPD INTERNATIONAL EPD SYSTEM

Dulux envirO_2

ECO PLATFORM EPD VERIFIED

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

Contents

For generations, consumers and customers have trusted Dulux for premium and long-lasting coatings for residential and commercial properties, and we are proud to have been voted Australia's Most Trusted Paint Brand* each year since 2013.

*Reader's Digest Most Trusted Brands 2013-2025 – Australia

Information about Dulux

Committed to a Sustainable Future

Staying at the forefront of technology and investing in research & development is fundamental to building sustainable solutions. Dulux is committed to continually developing new solutions that help reduce environmental impact and adhere to industry standards.

Manufacturing & Operations

Our world class manufacturing facility (15 Polaris Road, Mickleham VIC 3064) has implemented technology to reduce Dulux's environmental impact, including 300kW solar power generation, rain harvesting and on-site waste water management. Dulux manages the environmental performance of our operations through an integrated safety and sustainability management system to continuously deliver improvements across all facets such as safety and disaster prevention, environmental risks, waste generation, energy and water consumption.

Post-consumer Waste Management

Dulux is a founding member of Paintback®, an initiative to responsibly dispose of unwanted paint and packaging via collection and treatment facilities. Paintback repurposes the valuable materials in leftover paint into recycled packaging, alternative energy fuel as well as water resources and is funding research to find better uses for unwanted paint and packaging waste.

Memberships

Dulux is a proud member of the Green Building Council of Australia (GBCA), a founding member of Paintback Australia's national waste paint and packaging program, a founding member of the Australian Supply Chain Sustainability School (ASCSS) and maintains strong links with key industry bodies.

Only applicable to packaging

Product information

Product(s) covered by EPD

Table 1: Product information

Product Name	Dulux envirO2™ Interior
Product Code	59M84179
Gloss Level	Matt
Colour Base	Vivid White
Product Description	Dulux envirO2 Interior Matt is a very low VOC, low odour premium water-based paint. It produces a washable, stain resistant and hard-wearing finish suitable for all interior living areas. It contains mould protection to help prevent mould growth.
Spread Rate m^2/L	16*
Coats	2
L/m^2	0.125**
kg/m^2	0.171**
Density	1.368 kg/L
VOC g/L	< 1
Name and location of production site(s)	Merrifield, Mickleham, Victoria, Australia
Certifications	Global GreenTag GreenRate™ Level A
	Global GreenTag HealthRate™ Platinum Health
	The Declare Label: Living Building Challenge (LBC) Red List Free

*Paint spread rate for a single coat
**Paint use for two coats.

This EPD covers Dulux® envirO_2™ Interior Matt paint manufactured by Dulux in Merrifield, Victoria (15 Polaris Rd, Mickleham VIC 3064) (as shown in Table 1). The industry classification and technical specifications applying to the product are presented in Table 2 and Table 3.

Dulux envirO2™ Interior Matt | Dulux

Technical Datasheet

Safety Datasheet

Table 2: Industry classification

Product	Classification	Code	Category
Dulux® envirO_2™ paint	UN CPC Ver.2	35110	Paints and varnishes and related products
	ANZSIC 2006	C191600	Paint and Coatings Manufacturing

Table 3: Technical specification

Product	Relevant Standards
Dulux® envirO_2™ paint	AS/NZS 2311:2009. Guide to the painting of buildings. Sydney: Standards Australia

Content Declaration

Table 4: Content declaration for one m^2 of product

Product Content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Monomers (dry mass) (e.g. acrylates)	0.0277	0	0	0
Pigments (dry mass) (e.g. titanium dioxide)	0.0344	0	0	0
Extenders (e.g. kaolin, perlite)	0.0278	0	0	0
Other (e.g. organic alcohols)	0.0112	0	0	0
Water	0.0695	0	0	0
Sum	**0.171**	**0**	**0**	**0**

Table 5: Content declaration of Packaging for one m^2 of product

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/ declared unit
Paint pail (15L) – polypropylene bucket with steel handle	0.00617	3.49	0
Sum	**0.00617**	**3.49**	**0**

The formulation / bill of materials (BOM) of product was used as the basis for its material content. As Dulux's BOMs change slightly over time, all BOMs were extracted from the company's ERP system, SAP, as of April 2025 for consistency. The formulation / bill of materials (BOM) of product was used as the basis for its material content. As Dulux's BOMs change slightly over time, all BOMs were extracted from the company's ERP system, SAP, as of April 2025 for consistency.

Dangerous substances from the candidate list of SVHC for Authorisation

Hazardous properties for Hazardous Substances and New Organisms (HSNO classifications) and Globally Harmonized System (GHS) classifications are reproduced from vendor SDS or OECD's global portal to information on chemical substances available at: www.echemportal.org/echemportal/substance-search.

The product:

- Does not release dangerous substances to soil and water.
- Does not contain hazardous substances requiring labelling.
- Does not contain materials identified in the European Chemicals Agency's Candidate List of Substances of Very High Concern in the products at a concentration greater than 0.1% (European Union, 2024).

LCA Information

Declared Unit

The declared unit is 1 m^2 of coated surface using the number of coats recommended by AS/NZS 2311:2009 (i.e., a single undercoat and two top coats for a surface such as plasterboard), plus the packaging of paint. Conversion factor from m^2 to mass is provided in Table 1.

System boundaries

As shown in Table 6 and Figure 1, this EPD is of the type b “Cradle to gate with options, modules C1–C4, module D and with optional modules” (A1–A3 + C + D and additional modules A4-A5). Other life cycle stages (Modules B1-B7) are dependent on particular scenarios and best modelled at the building level.

Table 6: Modules included in the scope of the EPD

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	Raw material supply	Transport of raw materials	Manufacturing	Transport to customer	Construction / Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demolition	Transport to waste processing	Waste processing	Disposal	Reuse/recovery/recycling potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	AU	AU	AU	–	–	–	–	–	–	–	AU	AU	AU	AU	AU

X = included in the EPD; ND = Module not declared (such a declaration shall not be regarded as an indicator result of zero)

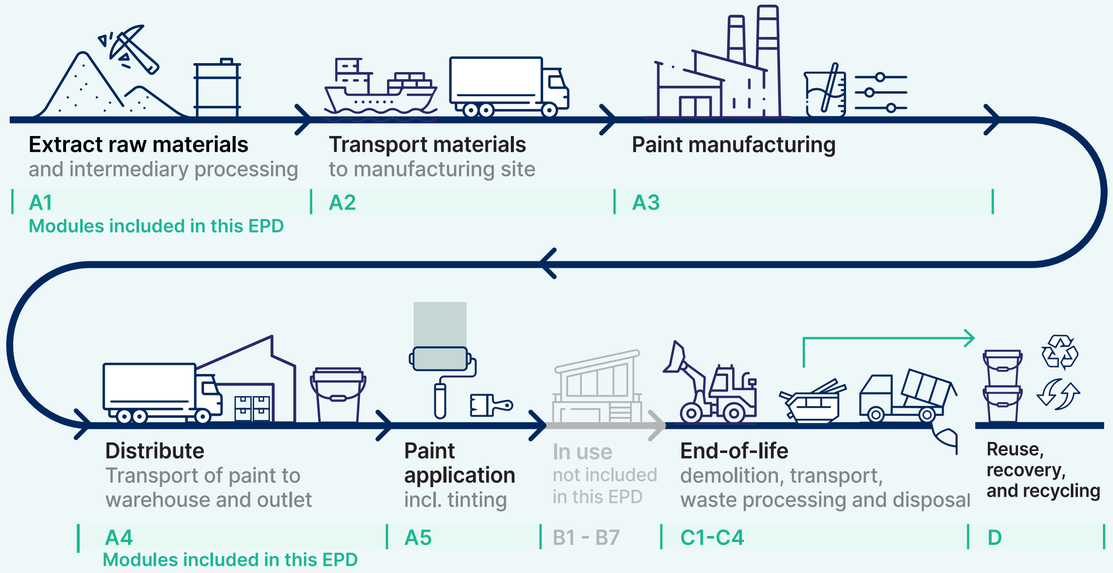

Figure 1: Modules included in the scope of this EPD

LCA Information

Product system process flow diagram

An overview of the manufacturing process of Dulux envirO_2 paints is shown in Figure 2. The manufacturing process includes the following steps:

Premix. Weighing, measuring and mixing of ingredients, such as monomers, pigments, extenders and water, according to the paint's formulation.

Grinding and dispersion. Grinding of ingredients, such as pigments, to ensure uniform texture. Adding binders (monomers) and solvent (water) to create a uniform distribution and desired consistency.

Final additives and quality control. Adding additives (extenders) to improve paint's properties, such as durability, ease of application and resistance to wear.

Filling and packaging. The finished paint is filled into pails.

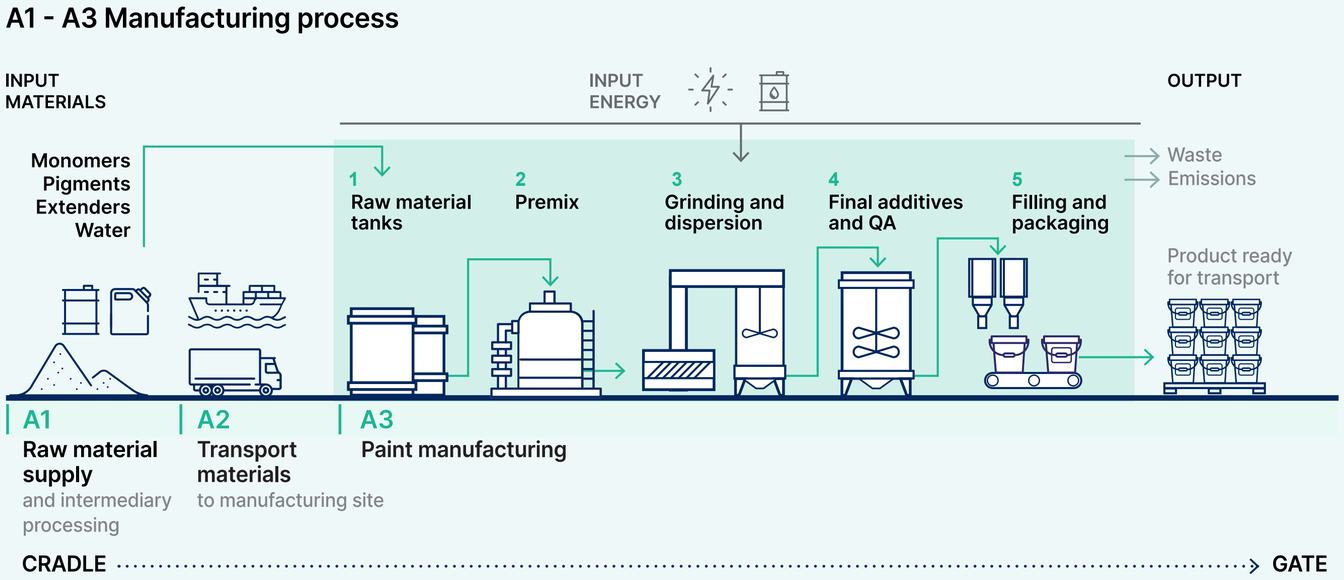

Figure 2: Manufacturing process

LCA Information

LCA Software and Database

The LCA model was created using the Life Cycle for Experts (LCA FE) (formerly known as GaBi) Software for life cycle engineering, developed by Sphera Solutions, Inc. The Managed LCA Content (MLC) database CUP2025.1 (Sphera, 2025), formerly known as GaBi LCI database, provides the life cycle inventory data for several of the raw and process materials obtained from the background system.

Electricity

To support the PCR requirements for market-based reporting, thinkstep-anz published a whitepaper which provides details of electricity grid residual supply mixes (RSM) and residual mix emission factors (RMF) for each state in Australia for FY2023 (thinkstep-anz, 2024). The RSMs are calculated by removing the renewable electricity that is considered 'voluntarily surrendered'.

The composition of the residual electricity grid mix of Victoria is modelled in LCA FE based on published data of the generation per fuel type, and the national electricity mix trade between states for the financial year 2022-07-01 to 2023-06-30 (Australian Government, 2024). The Victorian residual electricity mix is made up of Brown coal 64.2%, Wind 14.4%, Solar 7.41%, Hydro 5.83%, Natural gas 2.15%, Biogas 0.662%, and Biomass 0.0391%. The remaining electricity is imported: 2.38% is imported from Southern Australia, 1.56% is imported from Tasmania, and 1.43% is imported from New South Wales.

Losses of electricity during generation and distribution are included. Onsite consumption (5.57%) is calculated based on the same source as the grid mix (Australian Government, 2024). The medium voltage (1kV-60kV) grid's transmission and distribution losses (2.31%) are calculated based on data from the Australian Energy Market Operator (AEMO, 2022).

The emission factor (EF) for the Victoria residual grid mix for the GWP-GHG indicator is 1.01 kg CO_2-eq/kWh (based on EF3.1).

In addition, electricity generated from onsite solar panels is also used at Merrifield site. There is no contractual instrument demonstrating the origin of that electricity has been sold to a third party. Therefore, this electricity has been modelled with dataset 'AU: Electricity from photovoltaic'.

Location-based grid mix EFs (using the published grid mix) is used for other electricity consumption including modules C and D.

Modelling of infrastructure/capital goods

In general, the production and end-of-life processes of infrastructure and capital goods used in the product system are not included within the system boundary. An exception is for capital goods for electricity generation, where the capital goods are very important for modelling of changes towards more renewable generation. Capital goods related to electricity generation is included in all electricity datasets used in this study.

LCA Information

Allocation

Multi-output Allocation

Multi-output allocation generally follows the requirements of PCR 2019:14 v2.0.1 (EPD International, 2025b).

At Dulux's Merrifield plant, five envirO_2 paint products are produced. These products are all interior, water-based paints manufactured with similar ingredients and processes. Electricity and water consumption and waste data was unavailable separately for these paint products, therefore, electricity and water consumption and waste are allocated according to the production volume by weight of each product.

Consistent allocation procedures are uniformly applied to similar inputs and outputs of the product system under consideration. The sum of inputs and outputs allocated to these products is equal to the total inputs and outputs of the allocated unit process at the site level.

Recycling and recycled inputs

Environmental impacts of all processes before end-of-waste state are included in the system boundary of this EPD. In module A5, steel scrap from paint packaging reaches end-of-waste state when it arrives the sorting/recycling facilities. Polypropylene scrap from paint packaging reaches end-of-waste state when it is delivered to recycling facilities and recycled into secondary polypropylene granulate. Cut-off allocation is applied at the system boundary. Any subsequent processing of the material is allocated to the subsequent product system and is not considered in this study.

The system boundary includes the landfilling of manufacturing waste from module A3 and packaging waste from module A5.

Within this EPD, for inflows of recycled materials to the production system, the recycling process and the transportation from the recycling process to where the material is used are included. The production process of secondary polypropylene granulate and steel, and their transport to paint packaging manufacturer are included in the system boundary.

LCA Information

Data Quality Assessment

This EPD follows the requirements for data quality in section 4.6 of PCR 2019:14v2.0.1, including the classification of primary data, representative secondary data and proxy data.

The data quality assessment (DQA) in this EPD is completed in line with EN 15941 and utilises the system for “Data quality level and criteria of the UN Environment Global Guidance on LCA database development”, one of the two systems permitted by EN 15804+A2.

Total share of primary data, of GWP-GHG results for A1-A3 is 6.24%. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Table 7: Data sources and share of primary data

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Generation of electricity and fuel used in manufacturing of product	Database	MLC v2025.1	2021-2023	Primary	2.29%
Production of pigments	Database	MLC v2025.1	2019-2024	Secondary	0%
Production of resins	Database	MLC v2025.1	2012-2024	Secondary	0%
Transport of raw materials to manufacturing site	Database	MLC v2025.1	2021-2024	Primary	4.15%
Production of packaging	Database	MLC v2025.1	<7 years old	Secondary	0%
Production of extenders	Database	MLC v2025.1	2024	Secondary	0%
Other processes	Database	MLC v2025.1	2021–2024	Secondary	0%
Total share of primary data, of GWP-GHG results for A1-A3					**6.45%**

LCA Information

Modelling of downstream stages

The processes below are included in the product system to be studied. For modules beyond A3, the scenarios included are currently in use and are representative for one of the most probable alternatives.

Construction stage (Modules A4, A5)

Distribution to customer (Module A4) includes the following processes:

- Truck, rail and sea transport to retailer/wholesaler.
- Paint tinting at retailer/wholesaler, including production of tinter and tinter packaging, energy for mixing and disposal of tinter packaging. Transport and landfill for tinter packaging is also included.
- Courier van for direct delivery to customer (where used) or customer collection from retailer/wholesaler (where customer collects).
- Electricity use in warehouses during distribution.

A summary of transport distances and utilisations is presented in Table 8. This is an average scenario that may not be representative for any given customer. Customers should individually establish the transport requirements between distribution centre and their site rather than relying on the average.

Table 8: Transport distance and vehicle utilisation during distribution

Vehicle	Parameter	Value
Truck (XL)	Distance (km)	352
	Utilisation	90.25%
	MLC Database vehicle	Truck-trailer – diesel driven, Euro 0-6 mix, 34-40t gross weight / 27t payload capacity
Truck (L)	Distance (km)	8
	Utilisation	85%
	MLC Database vehicle	Truck – diesel driven, Euro 0 - 6 mix, 20 - 26t gross weight / 17.3t payload capacity
Rail	Distance (km)	737
	Utilisation	85%
	MLC Database vehicle	Rail transport cargo – average – average train, gross tonne weight 1000t / 726t payload capacity
Sea	Distance (km)	3
	Utilisation	81%
	MLC Database vehicle	Container ship – 27 500 dwt payload capacity, ocean going
Diesel car	Kilometres travelled	14
	Utilisation	41.95 L of paint per trip
	MLC Database vehicle	Car diesel – diesel driven, Euro 4, passenger car, engine >2L

LCA Information

The application stage (Module A5) includes application of the paint, losses of paint to waste water treatment following cleaning, production, distribution and disposal of the paint that is lost (i.e., paint residue in the pail), releases of volatile organic compounds (VOCs) and water during application and disposal of paint packaging.

As this EPD is intended primarily for commercial customers, the application stage is modelled based upon the measurements and recommendations of Dulux's internal trade painter. The following processes are included in Module A5:

- Paint application using a roller (typical for commercial painting).
- Water for washing roller and tray.
- Wastewater treatment for water and paint residue.
- Emissions of water vapour and VOCs to air during paint drying. It is assumed that all volatile components evaporate in module A5.
- Waste treatment for packaging, including transport to end-of-life.
- End-of-life is modelled as a weighted average of landfill and recycling.
- Landfill is included within the system boundary.
- Recycled steel packaging is assumed to reach its end-of-waste state after transport to the recycler.
- Due to its low value, polypropylene packaging which is sent to recycling is assumed to reach its end-of-waste state after it has been recycled into recycled polypropylene (after grinding, washing, granulation and pelletising).
- Paint waste left in the pail is assumed to be landfilled in all cases.
- Production and transport of paint waste left in the pail are included.
- Production of roller and tray are not included, as it is assumed that these are reused many times before their eventual disposal. Their impacts would therefore be negligible.

Paint packaging is also disposed of within this module. Based on the Australian Packaging Covenant average recycling rates for polypropylene packaging, 27% of all polypropylene pails are assumed to be recycled, with the remainder landfilled (Madden, B. and Florin, N., 2019). No recycling data specific to paint packaging in Australia were available at the time of publication.

Table 9: Application of the product in the building

Scenario information	Unit (expressed per declared unit)
Water use (for washing roller and tray)	1 L
Waste materials on the building site before waste processing, generated by the product's installation	Paint waste 0.00256 kg Packaging waste 0.00617 kg
Output materials as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route)	Collection for landfill: → Paint waste 0.00256 kg → Packaging waste 0.00450 kg Collection for recycling: → Packaging waste 0.00167 kg
Direct emissions to ambient air, soil and water	VOCs emissions < 1 g

LCA Information

End of Life (Modules C1-C4)

All used Dulux paint products will be disposed at end-of-life. The used paint is assumed to be bone dry, meaning that all VOCs and water have long since evaporated. R2 value data of paint materials is not available in the European Union Guidance on PEF (European Commission, 2020). Therefore, a conservative assumption has been made that all used paint materials will be landfilled in the end-of-life regardless of their applications (see Table 10). This scenario is currently in use and is representative for one of the most likely scenario alternatives.

In addition, since data specific for paint products in Australia for end-of-life (modules C1-C4) are missing, default values in section 4.8.4 in PCR 2019:14 v2.0.1 (EPD International, 2025b) are used (see Table 11). Values for C3 are not shown since the product is assumed to be 100% landfilled.

Fossil carbon emissions due to the degradation of carbon content in the product in landfill is calculated. The degradable carbon fraction is 4.6%. This value is based on laboratory test report provided by Dulux. Carbon contents of paint products are calculated based on their compositions and the corresponding chemical formula.

Table 10: End of life scenarios for products

Process	Unit (expressed per declared unit of products)
Excavator	1 m^2 of coated surface using the number of coats by AS/NZS 2311:2009
Recovery system specified by type	0% for recycling*
Disposal specified by type	100% for landfill*
Assumptions for scenario development	→ C1 – Demolition/deconstruction of steel, wood, and other materials with diesel consumption of 1.1 kWh/tonne (EPD International, 2025b) → C2 – 80 km of transport by truck (EPD International, 2025b) → C4 – Compacting of inert construction waste for landfills (including backfilling) with diesel consumption of 1.6 kWh/tonne (EPD International, 2025b)

***The European Union Guidance on PEF does not identify an R2 value for paint products (European Commission, 2020). Therefore, it is assumed that recycling rate is 0%.**

Table 11: Default data used for modelling modules C1, C2 and C4

Module	Process	Data	Quantity
C1	Demolition/deconstruction of steel, wood, and other materials	Diesel	1.1 kWh/tonne
C2	Transport (for products/ materials not to be incinerated)	Truck, Diesel, Euro IV, 14 - 20t gross weight, 50% load factor*	80 km
C4	Compacting of inert construction waste for landfills (including backfilling)	Diesel	1.6 kWh/tonne

LCA Information

Recovery and Recycling potential (Module D)

Benefits and loads from recycling polypropylene scrap from used paint pails (scrapped in module A5) is included under module D. Only net scrap is sent to module D (i.e. the scrap remaining after any recycled content needed for modules A1-A3 is subtracted).

The net scrap rate is -27.3% per 1 kg of polypropylene. The negative net scrap rate for polypropylene means recycled materials output do not meet the need of recycled material input. Environmental burdens of producing virgin materials to fill the gap between the input and output are considered in module D.

LCA Information

Cut off criteria

As each bill of materials (BOM) of paints contains a long list of chemicals – often used in very tiny quantities – the approach applied in this EPD was to focus on those with the most significant mass and then to scale the resulting composition up to 100% of the mass. Monomers and titanium dioxide were modelled completely (i.e. no exclusions) due to the environmental relevance of these materials.

LCA Information

Key assumptions

One of the key assumptions in this EPD is that the environmental impacts of the <7% of minor additives used in paint formulations can be adequately represented by the remaining >93% of the paint composition.

The following assumptions also can affect the results of the EPD:

- Proxy data was used in resin production, which can affect the impact of resins. However, no other data was available.
- Proxy data was used in production of extenders and other materials, which can affect their impacts. However, no country-specific data was available.

LCA Information

Assessment Indicators

The results tables describe the different environmental indicators for each product per declared unit, for each declared module. The EN 15804 reference package based on EF 3.1, February 2023 is used.

Table 12 contains the core environmental impact indicators in accordance with EN 15804:2012+A2:2019, describing the potential environmental impacts of the product.

Table 13 provides additional environmental impact indicators in accordance with EN 15804:2012+A2:2019.

Table 14 shows the life cycle inventory indicators for resource use.

Table 15 displays the life cycle inventory indicators for waste and other outputs.

Table 16 displays biogenic carbon content indicators.

Table 17 contains results for environmental impact indicators in accordance with EN 15804:2012+A1:2013 to aid backward comparability.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

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Table 12: EN15804+A2 Core Environmental Impact Indicators

Impact category	Indicator	Unit
Climate change – total	GWP-total	kg CO_2-eq.
Climate change – fossil	GWP-fossil	kg CO_2-eq.
Climate change – biogenic	GWP-biogenic	kg CO_2-eq.
Climate change – land use and land use change	GWP-luluc	kg CO_2-eq.
Ozone depletion	ODP	kg CFC11-eq.
Acidification	AP	Mole of H^+ eq.
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.
Eutrophication aquatic marine	EP-marine	kg N eq.
Eutrophication terrestrial	EP-terrestrial	Mole of N eq.
Photochemical ozone formation	POCP	kg NMVOC eq.
Depletion of abiotic resources – minerals and metals[1]	ADP-m&m	kg Sb-eq.
Depletion of abiotic resources – fossil fuels[1]	ADP-fossil	MJ
Water use[1]	WDP	m^3 world equiv.

LCA Information

Table 13: EN15804+A2 Additional Environmental Impact Indicators

Impact category	Indicator	Unit
Climate Change[2]	GWP-GHG	kg CO_2-eq.
Climate Change[3]	GWP-GHG (IPCC AR5)	kg CO_2-eq.
Particulate Matter emissions	PM	Disease incidences
Ionising Radiation – human health[4]	IRP	kBq U235 eq.
Eco-toxicity (freshwater)[1]	ETP-fw	CTUe
Human Toxicity, cancer[1]	HTP-c	CTUh
Human Toxicity, non-cancer[1]	HTP-nc	CTUh
Land use related impacts / soil quality[1]	SQP	Dimensionless (Pt)

LCA Information

Table 14: Life cycle inventory indicators on use of resources

Parameter	Indicator	Unit
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ
Use of renewable primary energy resources used as raw materials	PERM	MJ
Total use of renewable primary energy resources	PERT	MJ
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ
Total use of non-renewable primary energy resources	PENRT	MJ
Use of secondary material	SM	kg
Use of renewable secondary fuels	RSF	MJ
Use of non-renewable secondary fuels	NRSF	MJ
Net use of fresh water	FW	m^3

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Table 15: Life cycle inventory indicators on waste categories and output flows

Parameter	Indicator	Unit
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
Radioactive waste disposed	RWD	kg
Components for reuse	CRU	kg
Materials for recycling	MFR	kg
Materials for energy recovery	MER	kg
Exported electrical energy	EEE	MJ
Exported thermal energy	EET	MJ

Table 16: Biogenic carbon content indicators

Parameter	Indicator	Unit
Biogenic carbon content – product	BCC-prod	kg C
Biogenic carbon content – packaging	BCC-pack	kg C

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2

LCA Information

Table 17: EN15804+A1 Environmental Impact Indicators

Impact category	Indicator	Unit
Global warming potential	GWP (EN15804+A1)	kg CO_2-eq.
Ozone depletion potential	ODP (EN15804+A1)	kg CFC11-eq.
Acidification potential	AP (EN15804+A1)	kg SO_2-eq.
Eutrophication potential	EP (EN15804+A1)	kg PO_4^{3-}-eq.
Photochemical ozone creation potential	POCP (EN15804+A1)	kg Ethene-eq.
Abiotic depletion potential for non-fossil resources	ADPE (EN15804+A1)	kg Sb-eq.
Abiotic depletion potential for fossil resources	ADPF (EN15804+A1)	MJ

Disclaimers

[1]The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

[2]This indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero. It has been included in the EPD following the PCR.

[3]GWP-GHG (IPCC AR5) is an additional GWP100 indicator that is aligned with the Intergovernmental Panel on Climate Change (IPCC) 2013 Fifth Assessment Report (AR5) (IPCC 2013), national greenhouse gas reporting frameworks in Australia and New Zealand and previous versions of the Construction Products PCR (PCR2019:14v1.11). It excludes biogenic carbon and indirect radiative forcing.

[4]This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and some construction materials, is also not measured by this indicator.

Environmental performance

The following tables show the results for 1 m^2 of coated surface using the number of coats recommended by AS/NZS 2311:2009.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Recovered energy leaving the product system in module A5 has been balanced out already in modules A1-A3.

The use of primary energy is separated into energy used as raw material and energy used as energy carrier as per option C in Annex 3 in the PCR (EPD International, 2025a).

Energy indicators (MJ) are always given as net calorific value.

Environmental performance

Results for primary scenario

Table 18: EN15804+A2 Core environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2-eq.	3.29E-01	2.37E-02	6.20E-03	1.09E-04	1.19E-03	0	8.90E-03	3.28E-03
GWP-fossil	kg CO_2-eq.	3.28E-01	2.37E-02	6.18E-03	1.09E-04	1.19E-03	0	8.90E-03	3.26E-03
GWP-biogenic	kg CO_2-eq.	1.06E-03	1.53E-05	2.19E-05	2.24E-08	2.37E-07	0	3.26E-08	1.67E-05
GWP-luluc	kg CO_2-eq.	7.11E-05	1.25E-06	2.13E-06	2.60E-09	2.85E-08	0	3.78E-09	8.18E-07
ODP	kg CFC11-eq.	5.91E-11	1.89E-10	9.04E-13	1.57E-17	1.72E-16	0	2.28E-17	1.07E-14
AP	Mole of H^+ eq.	2.27E-03	1.22E-04	4.62E-05	6.38E-07	8.91E-06	0	9.27E-07	5.71E-06
EP-freshwater	kg P eq.	9.90E-07	4.58E-07	1.78E-07	1.66E-11	1.82E-10	0	2.41E-11	4.30E-09
EP-marine	kg N eq.	4.25E-04	5.17E-05	9.76E-06	3.20E-07	4.51E-06	0	4.66E-07	1.37E-06
EP-terrestrial	Mole of N eq.	4.52E-03	5.64E-04	1.05E-04	3.51E-06	4.94E-05	0	5.10E-06	1.48E-05
POCP	kg NMVOC eq.	1.29E-03	1.28E-04	7.22E-05	8.62E-07	9.05E-06	0	3.81E-06	6.31E-06
ADP-m&m[1]	kg Sb-eq.	5.10E-07	8.42E-10	7.92E-09	1.07E-12	1.18E-11	0	1.56E-12	3.17E-10
ADP-fossil[1]	MJ	7.39E+00	3.11E-01	1.29E-01	1.45E-03	1.59E-02	0	2.10E-03	1.10E-01
WDP[1]	m^3 world equiv.	1.05E-01	9.03E-04	1.71E-03	3.98E-07	4.38E-06	0	5.79E-07	1.66E-04

Environmental performance

Table 19: EN15804+A2 Additional Environmental Impact Indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG[2]	kg CO_2-eq.	3.28E-01	2.37E-02	6.19E-03	1.09E-04	1.19E-03	0	8.90E-03	3.28E-03
GWP-GHG (IPCC AR5)[3]	kg CO_2-eq.	3.28E-01	2.37E-02	6.18E-03	1.09E-04	1.19E-03	0	8.95E-03	3.28E-03
PM	Disease incidences	2.38E-08	1.09E-09	5.32E-10	1.29E-11	4.57E-11	0	1.88E-11	5.50E-11
IRP[4]	kBq U235 eq.	1.72E-02	1.20E-05	4.07E-04	3.48E-08	3.82E-07	0	5.05E-08	8.36E-05
ETP-fw[1]	CTUe	3.64E+00	2.55E-01	6.85E-02	5.63E-04	6.19E-03	0	8.19E-04	7.49E-02
HTP-c[1]	CTUh	1.86E-09	6.84E-12	2.85E-11	8.81E-15	9.70E-14	0	1.28E-14	9.59E-13
HTP-nc[1]	CTUh	1.45E-07	6.78E-11	2.22E-09	1.47E-13	1.61E-12	0	2.13E-13	2.16E-11
SQP[1]	Pt	1.26E+00	5.55E-03	2.17E-02	2.55E-06	2.80E-05	0	3.71E-06	3.49E-03

Table 20: Use of resources

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	2.94E-01	6.67E-03	8.04E-03	6.40E-06	7.03E-05	0	9.31E-06	5.43E-03
PERM	MJ	0	0	0	0	0	0	0	0
PERT	MJ	2.94E-01	6.67E-03	8.04E-03	6.40E-06	7.03E-05	0	9.31E-06	5.43E-03
PENRE	MJ	6.10E+00	3.11E-01	1.77E-01	1.45E-03	1.59E-02	0	2.10E-03	1.10E-01
PENRM	MJ	1.29E+00	0	-4.83E-02	0	0	0	0	0
PENRT	MJ	7.39E+00	3.11E-01	1.29E-01	1.45E-03	1.59E-02	0	2.10E-03	1.10E-01
SM	kg	2.86E-03	0	4.35E-05	0	0	0	0	0
RSF	MJ	3.51E-09	1.22E-08	5.34E-11	0	0	0	0	0
NRSF	MJ	3.48E-08	1.21E-07	5.30E-10	0	0	0	0	0
FWT	m^3	1.26E-03	1.75E-05	2.15E-05	8.08E-09	8.88E-08	0	1.18E-08	1.17E-05

Environmental performance

Table 21: Waste production and output flows

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	1.38E-03	1.05E-11	2.10E-05	1.90E-14	2.09E-13	0	2.77E-14	1.36E-11
NHWD	kg	6.99E-02	3.59E-05	7.48E-03	3.01E-08	3.30E-07	0	1.01E-01	1.97E-05
RWD	kg	1.14E-04	1.04E-07	2.63E-06	2.79E-10	3.07E-09	0	4.06E-10	6.79E-07
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	1.32E-04	0	1.76E-03	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

Table 22: Biogenic Carbon Content

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
BCC-prod	kg C	0	0	0	0	0	0	0	0
BCC-pack	kg C	0	0	0	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2

Environmental performance

Table 23: EN15804+A1 Environmental Impact Indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP (A1)	kg CO_2-eq.	3.24E-01	2.35E-02	6.12E-03	1.08E-04	1.18E-03	0	7.68E-03	3.16E-03
ODP (A1)	kg CFC11-eq.	6.98E-11	2.20E-10	1.07E-12	1.87E-17	2.05E-16	0	2.72E-17	1.25E-14
AP (A1)	kg SO_2-eq.	1.88E-03	8.74E-05	3.78E-05	4.38E-07	6.05E-06	0	6.36E-07	4.57E-06
EP (A1)	kg PO_4^{3-}-eq.	1.78E-04	2.02E-05	5.17E-06	1.07E-07	1.52E-06	0	1.56E-07	5.47E-07
POCP (A1)	kg Ethene-eq.	1.52E-04	-6.48E-06	9.12E-06	4.81E-08	-2.13E-06	0	1.59E-06	1.26E-06
ADPE (A1)	kg Sb-eq.	5.11E-07	8.51E-10	7.94E-09	1.07E-12	1.18E-11	0	1.56E-12	3.22E-10
ADPF (A1)	MJ	6.64E+00	3.06E-01	1.14E-01	1.44E-03	1.58E-02	0	2.09E-03	1.06E-01

List of Abbreviations

ADP	Abiotic Depletion Potential
AP	Acidification Potential
AusLCI	Australian National Life Cycle Inventory Database
BOM	Bill of materials
EF	Emission factors
EoL	End-of-Life
EP	Eutrophication Potential
GWP	Global Warming Potential
LCAFE	Life Cycle for Experts (formerly known as GaBi)
LCI	Life Cycle Inventory
MLC	Managed LCA Content database (formerly known as GaBi LCI database)
m&m	minerals and metals
ODP	Depletion potential of the stratospheric ozone layer
PM	Potential incidence of disease due to PM emissions
POCP	Formation potential of tropospheric ozone
RMF	Residual mix emission factors
RSM	Residual supply mixes
VOC	Volatile Organic Compound
WDP	Water (user) deprivation potential, deprivation-weighted water consumption

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General information

An Environmental Product Declaration, or EPD, is a standardised and verified way of quantifying the environmental impacts of a product based on a consistent set of rules known as a PCR (Product Category Rules). The Dulux has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/ functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

The results for EN15804+A1 compliant EPDs are not comparable with EN15804+A2 compliant studies as the methodologies are different. To support backwards comparability and compatibility, environmental performance results have also been provided for the indicators required in EN15804+A1, although the study does not claim compliance with this standard.

Programme information

EPD programme operator:	**EPD International AB**
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Product Category Rules (PCR)

CEN standard EN 15804 served as the core Product Category Rules (PCR)

PCR:	PCR 2019.14 Construction Products, version 2.0.1 (published on 2025-06-05, valid until 2030-04-07)
PCR review was conducted by:	The Technical Committee of the International EPD® System. See www.environdec.com for a list of members.
Review Chairs:	Rob Rouwette, start2see Pty Ltd (chair), Noa Meron, thinkstep Ltd (co-chair). The review panel may be contacted via the Secretariat: www.environdec.com/support

General information

Verification

External and independent ('third-party') verification of the declaration and data, according to ISO 14025:2006, via EPD verification through:

- ☑ Individual EPD verification without a pre-verified LCA/EPD tool
- ☐ Individual EPD verification with a pre-verified LCA/EPD tool
- ☐ EPD Process Certification * without a pre-verified LCA/EPD tool
- ☐ EPD Process Certification* with a pre-verified LCA/EPD tool
- ☐ Fully pre-verified EPD tool

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Verifier approved by:

EPD Australasia and The International EPD System

Procedure for follow-up of data during EPD validity involves third-party verifier

- ☐ Yes
- ☑ No

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Geographical Scope

Australia

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1 (2025-10-06) – This EPD was previously combined with other products in EPD reg number S-P-01542.