

Environmental Product Declaration

According to ISO14025+EN15804+A2

This declaration is for: Dulux Trade Mouldshield Fungicidal Eggshell

> Provided by: AkzoNobel Decorative Paints



MRPI® registration 1.1.00788.2025

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COMPANY INFORMATION

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MRPI® REGISTRATION

1.1.00788.2025

DATE OF THIS ISSUE

4-4-2025

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4-4-2030

SCOPE OF DECLARATION

PROGRAM OPERATOR

Stichting MRPI®

Kingsfordweg 151 1043 GR Amsterdam

This MRPI®-EPD certificate is verified by Gert-Jan Vroege, Eco-Intelligence. The LCA study has been done by Liz Adams & Brienne Wiersema, Ecomatters B.V. The certificate is based on an LCA-dossier according to ISO14025+EN15804+A2. It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate list of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PRODUCT Dulux Trade Mouldshield Fungicidal Eggshell

DECLARED UNIT / FUNCTIONAL UNIT

1 Productiveness (m2)

DESCRIPTION OF PRODUCT

Dulux Trade Mouldshield Fungicidal Eggshell contains a special fungicide which inhibits the growth of fungi and mould inside buildings

VISUAL PRODUCT



MORE INFORMATION

www.duluxtradepaintexpert.co.uk/en/products/dulux-trade-mouldshield-fungicidal-eggshell

Ing. L. L. Oosterveen MSc. MBA	DEMONSTRATION	OF VERIFICATION
Managing Director MRPI	CEN standard EN15804 s	serves as the core PCR [1]
	Independent verification	of the declaration an data
	according to ISO1	4025+EN15804+A2
/	internal:	external: X
\mathcal{F}	Third party verifier: Gert-Jan Vroege, E	co-Intelligence
LeoCokwa	[1] PCR = Product Category Rules	Der
	1	







DETAILED PRODUCT DESCRIPTION (PART 1)

Dulux Trade Mouldshield Fungicidal Eggshell contains a special fungicide which inhibits the growth of fungi and mould inside buildings. Its broad spectrum of antifungal activity makes it ideal for most interior walls and ceilings likely be disfigured by mould. Tested to BS 3900 Part G6.

Typical use

Suitable for use on interior walls and ceilings likely to be disfigured by mould. Do not use on external surfaces.

Appication method

Brush or roller only.

For Health & Safety reasons relating to all fungicidal paints, spray application is not recommended. As with other water-based paints, do not use when the temperature is below 8°C (as recommended by British Standard BS6150).

Pack size

The products are packaged in packing of 2,5L and 5L.

Production process and conditions of delivery

During paint production, the raw materials are pre-weighed according to the percentage of each in the formulation. The pigment is then dispersed in a mixture of binder and solvent using a variety of machines. The amount and type of dispersion is product specific and depends on the type of finish required. Finally, tinter is added to correct the colour, the paint is thinned to viscosity, filtered and filled into the appropriate packaging container. All paint containers are transported from the production sites to a distribution center and finally to the customers in the UK.

Declared Unit

All impacts are calculated using the declared unit "Decoration of 1 m2 of surface with 1 layer of paint"

Paint Characteristics		Unit
Waterborne / Solventborne	Waterborne	value
Interior wall / Exterior wall / Trim	Interior wall	value
Density	1,3	kg/L
VOC content	0,011402548	kg/kg paint
Coverage	0,079	kg/m2
Number of layers	1	value
Lifetime	6	Years

Component (> 1%)	(kg / %)
Pigment: Lightfast Pigment	Confidential
Binder: Styrene-acrylic copolymer	Confidential
Solvent: Water	Confidential







SCOPE AND TYPE

The type of this EPD is cradle-to-gate with options and a caclulated representative of three paints. These are AkzoNobel Dulux Trade Mouldshield Fungicidal Eggshell Pure Brilliant White, Dulux Trade Mouldshield Fungicidal Eggshell Light Base and Dulux Trade Mouldshield Fungicidal Eggshell Medium Base. All major steps from the extraction of natural resources to the final disposal of the product are included in the environmental performance of the manufacturing phase, except those that are not relevant to the environmental performance of the product. This declaration does not imply an indicator result of zero. This EPD is representative for products produced in sold in the United Kingdom. For the end-of-life, the fate of the paint product is described within a UK context.

The software Sphera LCA for Experts v. 10.8 is used to perform the LCA. The background databases used are: a)Raw materials LCI database for the European coatings and printing ink industries b)Ecoinvent 3.10 (2024)

The validity of this EPD is in correspondence with the specifications of the LCA project report.

PRODU	CONSTRUCTION PRODUCT STAGE PROCESS STAGE						US	ER STA	GE			EN	D OF LI	FE STA	GE	BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse - Recovery - Recycling potential
A1	A2	A3	A4	A5	5 <mark>B1 B2 B3 B4 B5 B6 B7</mark> C1 C2 C3 C4					D						
Х	Х	Х	Х	Х	ND ND ND ND ND ND ND X X X					Х	Х					

X = Modules Assessed

ND = Not Declared









REPRESENTATIVENESS

This EPD is representative of three paint products:

- Dulux Trade Mouldshield Fungicidal Eggshell Pure Brilliant White (PBW)
 Dulux Trade Mouldshield Fungicidal Eggshell Light Base
- 3. Dulux Trade Mouldshield Fungicidal Eggshell Medium Base

This EPD is representative for the products manufactured in the UK and sold in the UK and Ireland. The paint is manufactured at a third-party UK based site. Due to data availability, the AkzoNobel production site in Stowmarket, UK is used as a proxy.







ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

				<u> </u>						<u>`</u>				57	04	00	00	04	
	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	1,15E-01	2,10E-03	4,01E-02	1,57E-01	6,23E-03	4,32E-03	0,00E+00	5,02E-04	9,30E-03	-9,37E-03	-9,94E-03							
GWP-fossil	kg CO2 eq	1,15E-01	2,10E-03	3,96E-02	1,57E-01	6,22E-03	3,03E-03	0,00E+00	5,02E-04	5,81E-03	-9,32E-03	-9,89E-03							
GWP- biogenic	kg CO2 eq	-4,28E-05	1,09E-06	4,15E-04	3,73E-04	3,21E-06	1,29E-03	0,00E+00	2,59E-07	3,48E-03	-4,48E-05	-4,86E-05							
GWP-luluc	kg CO2 eq	3,66E-04	7,19E-07	4,46E-05	4,11E-04	2,13E-06	4,81E-07	0,00E+00	1,72E-07	6,08E-07	-6,98E-06	-7,46E-06							
ODP	kg CFC11 eq	5,84E-09	4,23E-11	5,37E-10	6,41E-09	1,25E-10	2,01E-11	0,00E+00	1,01E-11	1,36E-11	-9,61E-11	-1,04E-10							
AP	mol H+ eq.	7,94E-04	6,79E-06	2,21E-04	1,02E-03	2,01E-05	3,23E-06	0,00E+00	1,62E-06	4,09E-06	-3,37E-05	-3,58E-05							
EP-fresh water	kg PO4 eq.	2,87E-05	1,43E-07	1,44E-05	4,32E-05	4,23E-07	6,00E-07	0,00E+00	3,41E-08	2,57E-07	-4,74E-06	-5,02E-06							
EP-marine	kg N eq.	1,13E-04	2,32E-06	4,18E-05	1,57E-04	6,87E-06	1,15E-06	0,00E+00	5,54E-07	1,81E-06	-7,43E-06	-7,87E-06							
EP- terrestrial	mol N eq.	1,18E-03	2,51E-05	4,33E-04	1,63E-03	7,42E-05	9,70E-06	0,00E+00	5,99E-06	1,78E-05	-7,67E-05	-8,11E-05							
POCP	kg NMVOC eq.	4,22E-04	1,11E-05	1,50E-04	5,84E-04	3,27E-05	9,14E-04	0,00E+00	2,64E-06	6,48E-06	-2,72E-05	-2,88E-05							
ADP- minerals & metals	kg Sb eq.	1,66E-06	5,67E-09	1,29E-06	2,95E-06	1,68E-08	4,40E-09	0,00E+00	1,35E-09	1,14E-09	-2,87E-08	-3,08E-08							
ADP-fossil	MJ, net calorific value	2,04E+00	3,06E-02	5,78E-01	2,65E+00	9,05E-02	1,13E-02	0,00E+00	7,30E-03	1,03E-02	-1,47E-01	-1,57E-01							
WDP	m3 world eq. Deprived	4,65E+00	1,96E-04	1,73E-02	4,67E+00	5,80E-04	8,98E-05	0,00E+00	4,68E-05	-3,24E-03	-3,16E-03	-3,36E-03							

GWP-total	=	Global Warming Potential total
GWP-fossil	=	Global Warming Potential fossil fuels
GWP-biogenic	=	Global Warming Potential biogenictotal
GWP-luluc	=	Global Warming Potential land use and land use change
ODP	=	Depletion potential of the stratospheric ozone layer
AP	=	Acidification Potential, Accumulated Exceedence
EP-freshwater	=	Eutrophication Potential, fraction of nutrients reaching freshwater end compartment
EP-marine	=	Eutrophication Potential, fraction of nutrients reaching marine end compartment
EP-terrestrial	=	Eutrophication Potential, Accumulated Exceedence
POCP	=	Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals & metals	=	Abiotic Depletion Potential for non-fossil resources [1]
ADP-fossil	=	Abiotic Depletion for fossil resources potential [1]
WDP	=	Water (user) deprivation potential, deprivation-weighted water consumption [1]

Disclaimer [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.







ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
РМ	Disease inci-dence	7,26E-09	1,61E-10	2,80E-09	1,02E-08	4,77E-10	4,17E-11	0,00E+00	3,85E-11	0,00E+00	7,23E-11	-4,85E-10							
IRP	kBq U235 eq.	1,03E-02	3,70E-05	3,80E-03	1,41E-02	1,10E-04	5,41E-05	0,00E+00	8,84E-06	0,00E+00	1,29E-05	-1,26E-03							
ETP-fw	CTUe	1,41E+00	7,23E-03	2,37E-01	1,66E+00	2,14E-02	3,83E-02	0,00E+00	1,73E-03	0,00E+00	2,10E+01	-5,14E-01							
HTP-c	CTUh	8,51E-11	1,30E-11	7,93E-10	8,91E-10	3,86E-11	6,18E-12	0,00E+00	3,11E-12	0,00E+00	5,49E-12	-1,92E-09							
HTP-nc	CTUh	8,50E-10	1,83E-11	8,76E-10	1,74E-09	5,40E-11	7,83E-11	0,00E+00	4,36E-12	0,00E+00	1,46E-10	-1,65E-10							
SQP	-	6,30E-01	3,06E-02	2,28E-01	8,88E-01	9,07E-02	7,49E-03	0,00E+00	7,31E-03	0,00E+00	2,13E-02	-2,46E-02							

PM	 Potential incidence of disease due to PM emissions
IRP	 Potential Human exposure efficiency relative to U235 [1]
ETP-fw	 Potential Comparative Toxic Unit for ecosystems [2]
HTP-c	 Potential Comparative Toxic Unit for humans [2]
HTP-nc	= Potential Comparative Toxic Unit for humans, non-cancer [2]
SQP	 Potential soil quality index [2]

Disclaimer [1]:

- 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.

Disclaimer [2]:

- 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.







OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 en A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	0,00E+00	0,00E+00	1,56E-06	1,56E-06	0,00E+00	8,69E-04	0,00E+00											
NHWD	kg	0,00E+00	0,00E+00	9,34E-05	9,34E-05	0,00E+00	1,66E-03	0,00E+00	3,51E-02	0,00E+00									
RWD	kg	0,00E+00																	
CRU	kg	0,00E+00																	
MFR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,89E-03	0,00E+00											
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,82E-04	0,00E+00	4,79E-03	0,00E+00									
EEE	kg	0,00E+00	5,95E-03																
ETE	kg	0,00E+00	1,25E-02																

HWD	=	Hazardous Waste Disposed
NHWD	=	Non Hazardous Waste Disposed
RWD	=	Radioactive Waste Disposed
CRU	=	Components for reuse
MFR	=	Materials for recycling
MER	=	Materials for energy recovery
EEE	=	Exported Electrical Energy
ETE	=	Exported Thermal Energy







RESOURCE USE per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	5,40E-02	4,85E-04	1,05E-01	1,60E-01	1,44E-03	6,39E-04	0,00E+00	1,16E-04	0,00E+00	1,89E-04	-1,32E-02							
PERM	MJ	0,00E+00	0,00E+00																
PERT	MJ	5,40E-02	4,85E-04	1,05E-01	1,60E-01	1,44E-03	6,39E-04	0,00E+00	1,16E-04	0,00E+00	1,89E-04	-1,32E-02							
PENRE	MJ	2,04E+00	3,06E-02	5,78E-01	2,65E+00	9,05E-02	1,13E-02	0,00E+00	7,30E-03	0,00E+00	1,03E-02	-1,47E-01							
PENRM	MJ	0,00E+00	0,00E+00																
PENRT	MJ	2,04E+00	3,06E-02	5,78E-01	2,65E+00	9,05E-02	1,13E-02	0,00E+00	7,30E-03	0,00E+00	1,03E-02	-1,47E-01							
SM	kg	0,00E+00	0,00E+00																
RSF	MJ	0,00E+00	0,00E+00																
NSRF	MJ	0,00E+00	0,00E+00																
FW	m3	1,66E-01	4,56E-06	4,03E-04	1,66E-01	1,35E-05	2,09E-06	0,00E+00	1,09E-06	0,00E+00	-7,54E-05	-7,36E-05							

PERE	=	Use of renewable energy excluding renewable primary energy resources
PERM	=	Use of renewable energy resources used as raw materials
PERT	=	Total use of renewable primary energy resources
PENRE	=	Use of non-renewable primary energy resources excluding non-renewable 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 resources
SM	=	Use of secondary materials
RSF	=	Use of renewable secondary fuels
NSRF	=	Use of non-renewable secondary fuels
FW	=	Use of net fresh water

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BBCpr	kg C	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ВССра	kg C	0,00E+00	0,00E+00	-9,84E-05	-9,84E-05	0,00E+00	9,84E-05	0,00E+00											

BCCpr = Biogenic carbon content in product

BCCpa = Biogenic carbon content in packaging







CALCULATION RULES (PART 1)

Cut off criteria

Some cut-offs were applied to the study. During the manufacturing process, the input of consumables and disposed packaging from the raw materials is cut off from the system boundaries due to lack of data on the composition of waste. Furthermore, brushes, clothes, buckets etc. used during the application process are excluded from the assessment since they are considered capital goods. Additionally, the energy consumed during application, used for instance in spray applicators, has not been included due to its insignificance.

Data quality and data collection period

Specific data was collected from AkzoNobel though a questionnaire, including inquiries about paint characteristics and packaging, production information and end-of-life. The data collection period for specific data was the year 2024.

Data gaps (i.e. transport data, end of life scenarios) were covered with data generic values for transport as described in the Product Environmental Footprint Category Rules - Decorative Paints document version 1.0 published by CEPE and reviewed in April 2018 and the Product Environmental Footprint method (European Comission, 2021). Generic data (i.e. upstream acquisition and production of raw materials, transport, waste treatment processes) was selected from Ecoinvent 3.10 database. In the case of missing data, a relevant proxy was searched and adjusted to the corresponding unit process. No primary data was available for the external manufacturing site, therefore the paints were modelled as being manufactured at another site (Stowmarket, UK) where data was available. Due to the manufacturing process of paint consiting mostly of the mixing of raw materials, there is no expected difference in manufacturing processes between sites beside electricity mix.

Allocation procedure

To allocate the emissions and inputs to the manufactured products, the decision-hierarchy in ISO 14044 is used (ISO 2006). It is not possible to sub-divide the site data into a more detailed level or find physical causalities between inputs and outputs, thus allocation is done based on mass, considering the annual production of paint product for each site. The production of paint comprises only of the mixing ingredients. Therefore, the environmental impact is expected to be related to the mass of the products.

Parameter	Value	Unit
VOC content	14,4	g/l
Density	1,3	kg/l
Coverage	16	m2/l
Number of layers	1	Quantity
Total product used	0,079	kg/m2

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 1)

A1. Raw materials supply

This module considers the extraction and processing of all raw materials and energy which occur upstream to the Dulux Trade Mouldshield Fungicidal Eggshell manufacturing process, as well as waste processing up to the end-of waste state.

A2. Transport of raw materials to manufacturer

This includes the transport distance of the raw materials to the manufacturing facility via road.

Vehicle type	Truck
Distance, KM	460
Capacity	>32 t ,64% payload







SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 2)

A3. Manufacturing

This module covers the manufacturing of the Dulux Trade Mouldshield Fungicidal Eggshell and includes all processes linked to production such as storing, mixing, packing and internal transportation. Use of electricity, fuels and auxiliary materials in paint production is accounted for.

Data regarding paint production was not available due to the manufacturing process taking place at a third-part manufacturing site. Therefore, an alaternative manufacturing site in Stowmarket, UK, was taken as an appropriate proxy site. Here primary data and site-specific data was provided for both the consumption of utilities and product packaging. The electricity is modelled using the Ecoinvent 3.10 datasets for the UK market mix. For upstream (raw material processes) and downstream processes (application, use, and waste processing) generic data is used when no specific data was available. The manufacture of production equipment and infrastructure is not included in the system boundary.

A4. Transport to Regional Distribution Centre and customer

All paint containers are transported from the production facility into a distribution centre and then finally to the customer. As no primary data was available for the transporation distances, the default values from the PEFCR for Decorative Paints were used.

Transport to RDC and PoS	Distance	Vehicle
Factory to Regional Distribution Centre	350km	Lorry (>32 ton)
Regional Distribution Centre to Point of Sale	370km	Lorry (>32 ton)

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 3)

A5. Application and use

This module includes the environmental aspects and impacts associated with the application and of the paint. It is assumed that no energy is required during the application of this paint. The use of paintbrushes and other appliances used during application are not included. There are some raw materials added in the paint formulations which contain small amounts of solvents. The VOC emissions during application of paint are included in this module.

C2. Transport to incineration or landfill

This module includes one-way transportation distance of the demolition or sorting site to the dump site.

Transport to waste processing	
Vehicle	Lorry (>32 ton)
Distance	100 km
Capacity utilisation	60%

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 4)

C3. Waste processing and C4. Disposal

The end of life stage is encompassed in these modules. It is assumed that paint is used as interior paint and that part of the paint is lost during application. The applied paint is then disposed of with the substrate on which it has been applied.

	% to Landfill	% to Incineration with energy recovery	
EOL, Interior wall paint	88%	12%	







DECLARATION OF SVHC

None of the substances contained in the product are listed in the "Candidate List of Substances of Very High Concern for authorisation", or they do not exceed the threshold with the European Chemicals Agency.

REFERENCES

EN 15804:2012+A1:2013 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products, of 11/2013.

European Commission, (2021). Annex II: Product Environmental Footprint Method. In Environmental Footprint Guidance Document. [Online] Available at: https://environment.ec.europa.eu/document/download/680503dc-5a19-4f6a-bb92-84d9bfc8f312_en?filename=Annexes%201%20to%202.pdf

□ISO 14040/14044 on Life Cycle Assessments

□ Product Environmental Footprint Category Rules - Decorative Paints version 1.0, 2018. Developed by the Technical Secretariat Decorative Paints of the European Council of the Paint, Printing Ink and Artists' Colours Industry.

□ Talbot R., 2024. Personal communication with Rob Talbot, Quality & Regulations Manager at AkzoNobel, Slough, UK (2024).

□ Thinkstep GaBi Software-System and Database for Life Cycle Engineering. Copyright 1992-2017 ThinkStep AG.

□Wernet, G., Bauer, C., Steubing, B., Reinhard, J., Moreno-Ruiz, E., and Weidema, B., 2016. The Ecoinvent database version 3 (part I): overview and methodology. The International Journal of Life Cycle Assessment, [online] 21(9), pp.1218–1230. Available at: http://link.springer.com/10.1007/s11367-016-1087-8

REMARKS

None



