



**Environmental
Product
Declaration**

According to EN15804+A2 (+indicators A1)



This declaration is for:
Premium Matt

Provided by:
Fleetwood Paints Ltd.

FLEETWOOD
— for COLOURFUL LIVES —



program operator
Stichting MRPI®
publisher
Stichting MRPI®
www.mrpi.nl

MRPI® registration
1.1.00640.2024
date of first issue
02-08-2024
date of this issue
02-08-2024
expiry date
02-08-2029





COMPANY INFORMATION



Fleetwood Paints Ltd.
Ballaghanea, A82 N67
Virginia, Co Cavan
+353 49 8547 209
www.fleetwood.ie

MRPI® REGISTRATION

1.1.00640.2024

DATE OF ISSUE

02-08- 2024

EXPIRY DATE

02-08-2029

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Gert-Jan Vroege, Eco Intelligence. The LCA study has been done by Liz Adams, Ecomatters B.V. The certificate is based on an LCA-dossier according to EN15804+A2 (+indicators A1). It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPD's 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.

PROGRAM OPERATOR

Stichting MRPI®
Kingsfordweg 151
1043 GR
Amsterdam

Ing. L. L. Oosterveen MSc. MBA
Managing Director MRPI

PRODUCT

Premium Matt

DECLARED UNIT/FUNCTIONAL UNIT

1m² of painted surface

DESCRIPTION OF PRODUCT

Fleetwood Premium Acrylic Matt is a high-quality matt emulsion made from 100% acrylic resin.

VISUAL PRODUCT



MORE INFORMATION

| DEMONSTRATION OF VERIFICATION | |
|--|-------------|
| CEN standard EN15804 serves as the core PCR(a) | |
| Independent verification of the declaration an data according to EN15804+A2 (+indicators A1) | |
| internal: | external: x |
| Third party verifier: Gert-Jan Vroege, Eco Intelligence | |
| | |
| [a] PCR = Product Category Rules | |



DETAILED PRODUCT DESCRIPTION

Fleetwood Premium Acrylic Matt is a high-quality matt emulsion made from 100% acrylic resin. It is suitable for all interior walls and ceilings. This low-odour paint is wipeable, providing a tough hard finish with great durability making it ideal for use in kitchens, bathrooms and other high-traffic areas. Suitable for use on all normal interior wall and ceiling surfaces.

Application method

The application is done by brush, roller or conventional spray.

Production process and conditions of delivery

Paints are produced to pre-determined formulations that are specific to each individual product. Raw materials are pre-weighed according to the percentage of each in the formulation. Pigment and fillers are dispersed in a solvent and then transferred to another mixing vessel and combined with binder. The amount and type of dispersion is product specific and depends on the type of finish required. Subsequently, colourants are added (if required) to generate the colour desired. Finally, the paint is adjusted to the correct viscosity, filtered and filled into the appropriate packaging container. All paint containers are transported from the production sites to the paint storage warehouse and finally to our customers.

Pack size

The products are packed in packaging with a capacity of 2.5, 5 and 10 litres.

| Paint Characteristics | | Unit |
|--------------------------------------|------------|---------------|
| Waterborne / Solventborne | Waterborne | value |
| Interior wall / Exterior wall / Trim | Interior | value |
| Density | 1,35 | kg/L |
| VOC content | 6,8 | g pr Kg paint |
| Coverage | 0,096 | kg/m2 |
| Number of layers | 2 | value |
| Lifetime | 5 | Years |

| Component (> 1%) | (%) |
|-------------------------------|--------------|
| Pigment: Lightfast Pigments | Confidential |
| Binder: Pure Acrylic Emulsion | Confidential |
| Solvent: Water | Confidential |

SCOPE AND TYPE

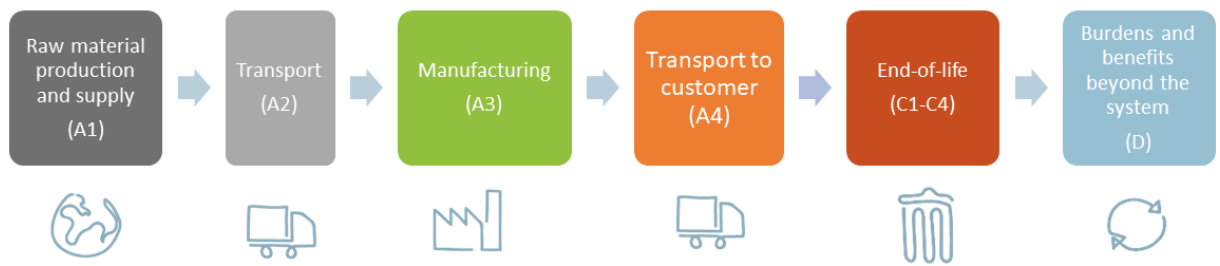
The type of this EPD is cradle-to-gate with options for a specific paint. All major steps from the extraction of natural resources to the final disposal of the product are included in the environmental performance of the manufacturing phase, except those that are not relevant to the environmental performance of the product. This declaration does not imply an indicator result of zero. This EPD is representative for products produced and sold in Ireland. The paint is produced in the Virginia, County Cavan manufacturing site in Ireland and the application market is also for customers within Ireland and the United Kingdom. Likewise, for the end-of-life, the fate of the paint product is described within an Irish and 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.

| PRODUCT STAGE | | | CONSTRUCTION PROCESS STAGE | | USER STAGE | | | | | | | END OF LIFE STAGE | | | | 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 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| X | X | X | X | X | ND | ND | ND | ND | ND | ND | ND | X | X | X | X | X |
| X= Modules Assessed ND= Not Declared | | | | | | | | | | | | | | | | |



REPRESENTATIVENESS

Not applicable as the EPD is specific for the product.

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

| | 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. | 3,96 E-01 | 1,25 E-02 | 5,73 E-02 | 4,65 E-01 | 4,58 E-03 | 3,81 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,65 E-03 | 0,00 E+00 | 1,85 E-02 | -6,00 E-03 |
| GWP-fossil | kg CO2 eq. | 3,95 E-01 | 1,25 E-02 | 5,59 E-02 | 4,63 E-01 | 4,57 E-03 | 3,80 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,65 E-03 | 0,00 E+00 | 1,83 E-02 | -5,95 E-03 |
| GWP-biogenic | kg CO2 eq. | 2,14 E-04 | 6,31 E-06 | 1,43 E-03 | 1,65 E-03 | 2,73 E-06 | 6,04 E-05 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 8,53 E-07 | 0,00 E+00 | 2,23 E-04 | -5,02 E-05 |
| GWP-luluc) | kg CO2 eq. | 3,24 E-04 | 4,29 E-06 | 2,86 E-05 | 3,57 E-04 | 1,32 E-06 | 2,61 E-07 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 5,65 E-07 | 0,00 E+00 | 1,13 E-06 | -3,92 E-06 |
| ODP | kg CFC11 eq. | 2,72 E-08 | 2,50 E-10 | 1,49 E-09 | 2,89 E-08 | 8,23 E-11 | 1,58 E-11 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 3,32 E-11 | 0,00 E+00 | 6,21 E-11 | -3,13 E-10 |
| AP | mol H+ eq. | 2,41 E-03 | 4,41 E-05 | 1,22 E-04 | 2,58 E-03 | 1,26 E-05 | 5,51 E-06 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 5,33 E-06 | 0,00 E+00 | 1,45 E-05 | -1,18 E-05 |
| EP-freshwater | kg PO4 eq. | 8,14 E-05 | 8,42 E-07 | 8,11 E-06 | 9,04 E-05 | 2,72 E-07 | 8,89 E-08 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,12 E-07 | 0,00 E+00 | 2,04 E-07 | -3,91 E-07 |
| EP-marine | kg N eq. | 4,01 E-04 | 1,47 E-05 | 2,99 E-05 | 4,45 E-04 | 5,32 E-06 | 2,46 E-06 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,82 E-06 | 0,00 E+00 | 5,63 E-06 | -2,52 E-06 |
| EP-terrestrial | mol N eq. | 3,92 E-03 | 1,59 E-04 | 2,50 E-04 | 4,32 E-03 | 4,61 E-05 | 2,59 E-05 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,97 E-05 | 0,00 E+00 | 6,09 E-05 | -2,68 E-05 |
| POCP | kg NMVOC eq. | 1,47 E-03 | 6,80 E-05 | 1,64 E-04 | 1,70 E-03 | 2,00 E-05 | 1,32 E-03 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 8,69 E-06 | 0,00 E+00 | 2,60 E-05 | -1,18 E-05 |
| ADP-minerals & metals | kg Sb eq. | 1,57 E-06 | 3,34 E-08 | 2,35 E-07 | 1,84 E-06 | 1,28 E-08 | 1,79 E-09 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 4,46 E-09 | 0,00 E+00 | 4,29 E-09 | -3,28 E-08 |
| ADP-fossil | MJ, net calorific value | 6,93 E+00 | 1,81 E-01 | 9,34 E-01 | 8,05 E+00 | 5,80 E-02 | 1,10 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,40 E-02 | 0,00 E+00 | 4,73 E-02 | -9,44 E-02 |
| WDP | m3 world eq. Deprived | 8,07 E+00 | 1,15 E-03 | 1,21 E-02 | 8,09 E+00 | -3,35 E-04 | -9,62 E-04 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,54 E-04 | 0,00 E+00 | -1,90 E-02 | -4,12 E-04 |

- GWP-total = Global Warming Potential total
- GWP-fossil = Global Warming Potential fossil fuels
- GWP-biogenic = Global Warming Potential biogenic
- 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 [2]
- ADP-fossil = Abiotic Depletion for fossil resources potential [2]
- WDP = Water (user) deprivation potential, deprivation-weighted water consumption [2]

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.



ENVIRONMENT 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 |
|--------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| PM | Disease incidence | 5,62 E-08 | 9,49 E-10 | 9,12 E-10 | 5,81 E-08 | 2,41 E-10 | 6,86 E-11 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,27 E-10 | 0,00 E+00 | 3,23 E-10 | -5,21 E-11 |
| IRP | kBq U235 eq. | 4,48 E-02 | 2,18 E-04 | 4,24 E-03 | 4,92 E-02 | 8,61 E-05 | 1,52 E-05 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,91 E-05 | 0,00 E+00 | 5,80 E-05 | -1,61 E-04 |
| ETP-fw | CTUe | 1,90 E+01 | 4,27 E-02 | 2,30 E-01 | 1,93 E+01 | 1,64 E-02 | 7,02 E-01 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 5,68 E-03 | 0,00 E+00 | 1,01 E+01 | -1,04 E-02 |
| HTP-c | CTUh | 7,10 E-10 | 7,71 E-11 | 1,62 E-10 | 9,50 E-10 | 2,47 E-11 | 3,96 E-11 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,02 E-11 | 0,00 E+00 | 1,42 E-11 | -1,17 E-11 |
| HTP-nc | CTUh | 4,74 E-09 | 1,08 E-10 | 3,51 E-10 | 5,20 E-09 | 3,72 E-11 | 1,57 E-10 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,43 E-11 | 0,00 E+00 | 6,45 E-10 | -3,71 E-11 |
| SQP | --- | 9,36 E-01 | 1,80 E-01 | 1,48 E-01 | 1,26 E+00 | 3,49 E-02 | 1,30 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,41 E-02 | 0,00 E+00 | 1,11 E-01 | -1,03 E-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 / A2)

| | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| HWD | kg | 0,00 E+00 | 0,00 E+00 | 4,85 E-03 | 4,85 E-03 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| NHWD | kg | 0,00 E+00 | 0,00 E+00 | 5,99 E-03 | 5,99 E-03 | 0,00 E+00 | 2,38 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,01 E-01 | 0,00 E+00 |
| RWD | kg | 2,13 E-05 | 0,00 E+00 | 3,35 E-10 | 2,13 E-05 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| CRU | kg | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| MFR | kg | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| MER | kg | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| EEE | MJ | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| ETE | MJ | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |

- 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 / A2)

| | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|-------|------|--------------|--------------|--------------|--------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| PERE | MJ | 2,61 E-01 | 2,86 E-03 | 6,68 E-02 | 3,31 E-01 | 1,09 E-03 | 2,15 E-04 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 3,81 E-04 | 0,00 E+00 | 7,43 E-04 | -1,64 E-02 |
| PERM | MJ | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| PERT | MJ | 2,61 E-01 | 2,86 E-03 | 6,68 E-02 | 3,31 E-01 | 1,09 E-03 | 2,15 E-04 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 3,81 E-04 | 0,00 E+00 | 7,43 E-04 | -1,64 E-02 |
| PENRE | MJ | 6,93 E+00 | 1,81 E-01 | 9,34 E-01 | 8,05 E+00 | 5,80 E-02 | 1,10 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,40 E-02 | 0,00 E+00 | 4,73 E-02 | -9,45 E-02 |
| PENRM | MJ | 1,77 E-03 | 9,44 E-06 | 9,31 E-06 | 1,79 E-03 | 2,46 E-06 | 7,16 E-07 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 1,25 E-06 | 0,00 E+00 | 4,12 E-06 | -6,36 E-07 |
| PENRT | MJ | 6,93 E+00 | 1,81 E-01 | 9,34 E-01 | 8,05 E+00 | 5,80 E-02 | 1,10 E-02 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 2,40 E-02 | 0,00 E+00 | 4,73 E-02 | -9,45 E-02 |
| SM | kg | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| RSF | MJ | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| NRSF | MJ | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 |
| FW | m3 | 1,88 E-01 | 2,69 E-05 | 2,83 E-04 | 1,88 E-01 | -7,80 E-06 | -2,24 E-05 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 3,58 E-06 | 0,00 E+00 | -4,44 E-04 | -9,59 E-06 |

- 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
- NRSF = Use of non-renewable secondary fuels
- FW = Use of net fresh water

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

| | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|-------|------|--------------|--------------|--------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BBCpr | Kg C | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0,00 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 |
| BCCpa | kg C | 0,00 E+00 | 0,00 E+00 | 1,70 E-04 | 1,70 E-04 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 | 0 E+00 |

- BCCpr = Biogenic carbon content in product
- BCCpa = Biogenic carbon content in packaging



CALCULATION RULES

Data quality and collection period:

All primary data was collected via a questionnaire in 2022 and completed by Fleetwood. This includes data on raw materials, transport, and the manufacturing site. Where primary data was not available, secondary data was used. Secondary data was taken from the PEFCR for decorative paints and EN15804+A2:2019 product category rules for construction products.

Cut-off criteria and allocation procedures:

Cut-off within the background processes is according to the respective methodologies (see documentation of the relevant processes (Wernet et al., 2016)).

In the foreground data, some cut-offs were applied to the study. These were the packaging of raw materials due to limited data availability and the materials required for the application of paint as they are considered capital goods. These cut-offs were employed as they are in line with LCA methodology and not expected to significantly impact the results of the LCA 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 a 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. The treatment and disposal of general manufacturing waste are included in the system boundaries.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

A1. Raw materials supply

This module considers the extraction and processing of all raw materials and energy which occur upstream to the manufacturing process, as well as waste processing up to end-of waste status.

A2. Transport of raw materials to the manufacturer

This includes the transport distance of the raw materials to the manufacturing facility via road. For a number of raw materials, supplier-specific data was used when available. For the remaining raw materials, the PEFCR for decorative paints is followed.

| Transport of Raw Materials (A2) | Vehicle type | Distance (km) | Source |
|---------------------------------|-----------------|---------------|-----------------------------|
| Raw materials (product) | lorry (>32 ton) | 250 | PEFCR for decorative paints |
| Raw materials (packaging) | lorry (>32 ton) | 250 | PEFCR for decorative paints |
| Raw material (supplier data) | lorry (>32 ton) | 405 | Fleetwood |
| Raw material (supplier data) | Container ship | 1246,4 | Fleetwood |
| Raw material (supplier data) | Container ship | 204 | Fleetwood |

A3. Manufacturing

This module covers the manufacturing of the paint and includes all processes linked to production such as storing, mixing, packing and internal transportation. The use of electricity and energy in paint production is taken into account.

Data regarding paint production was provided for the manufacturing site where the paint is produced: Virginia Co., Ireland. Transportation data for the transportation modes and distances were provided by Fleetwood. For electricity sources (standard market mix, Ireland) the Ecoinvent 3.10 dataset was used. For upstream (raw material processes) and downstream processes (application, use, and waste processing) generic data is used when no specific data could be obtained.

A4. Transport to customer

This module covers the transportation of the paint from the factory to the regional distribution centre, or directly to point of sale. Data for this module was provided by Fleetwood. Assumed distances and vehicle types of shown in Table 2.

| Transport to Point of Sale | Amount (%) | Vehicle type | Distance (km) | Source |
|---|--------------|-----------------|---------------|-----------|
| Transport to Regional Distribution Centre (RDC) | Confidential | lorry (>32 ton) | 90 | Fleetwood |
| Transport from RDC to POS | Confidential | lorry (<10 ton) | 143 | Fleetwood |
| Transport from RDC to POS | Confidential | lorry (<10 ton) | 127 | Fleetwood |
| Transport from RDC to POS | Confidential | lorry (<10 ton) | 60 | Fleetwood |
| Transport direct to POS | Confidential | lorry (<10 ton) | 30 | Fleetwood |
| Transport direct to POS | Confidential | lorry (<10 ton) | 160 | Fleetwood |
| Transport direct to POS | Confidential | lorry (<10 ton) | 189 | Fleetwood |



A5. Application and use

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

C2. Transport to incineration or landfill

This module includes a one-way transportation distance from the demolition or sorting site to the dump site. Table 3 shows the End-of-Life transport for applied paint. In accordance with the PEFCR for decorative paints, this is assumed to be 100% landfilled.

| Transport to EOL | Vehicle type | Distance (km) | Source |
|------------------|--------------|---------------|-----------------------------|
| Applied paint | lorry (>32t) | 80km | PEFCR for Decorative Paints |

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 exterior paint and, in accordance with the PEFCR for decorative paints, is 100% landfilled.

| End-Of-Life | Landfill | Incineration |
|---------------|----------|--------------|
| Applied paint | 100% | 0% |

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

- CEPI Eurokraft (2021). Continuous improvement of environmental footprint of paper sacks. [online]. Available at: https://www.cepi-eurokraft.org/wp-content/uploads/2024/01/2024_Fact-sheet_ESG_carbon-footprint-2021.pdf [Last accessed 11 June 2024].
- EN 15804:2012+A1:2013 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products, of 11/2013.
- 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.
- Hetheron J., 2024. Personal communication with John Hetheron, Technical Manager at Fleetwood Sherwin Williams, Ireland (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.