

This appendix refers to the EPD MD-20046-EN, developed according to EN15804+A2:2019.

Results in the appendix communicates LCA results in the format described in EN15804+A1:2013, in order to accommodate a need in the transition period between the two standard revisions. The appendix cannot stand alone, as the reference EPD describes the basis of the assessment.

Product 1: Painted GSY BEAM®

| ENVIRONMENTAL IMPACTS PER TON | | | | | | | | | | |
|-------------------------------|---|----------|-----------|----------|----------|----------|-----------|----------|----------|-----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| GWP | [kg CO ₂ -eq.] | 1.89E+03 | 8.18E+00 | 6.34E-01 | 0.00E+00 | 6.34E-01 | 8.26E+00 | 4.17E+01 | 0.00E+00 | -1.12E+03 |
| ODP | [kg CFC11-eq.] | 6.52E-12 | 2.04E-15 | 2.30E-16 | 0.00E+00 | 2.30E-16 | 2.06E-15 | 3.05E-06 | 0.00E+00 | -2.65E-12 |
| AP | [kg SO ₂ -eq.] | 4.34E+00 | 2.08E-02 | 2.40E-03 | 0.00E+00 | 2.40E-03 | 2.10E-02 | 2.47E-01 | 0.00E+00 | -1.80E+00 |
| EP | [kg PO ₄ ³⁻ -eq.] | 4.88E-01 | 4.93E-03 | 5.45E-04 | 0.00E+00 | 5.45E-04 | 4.97E-03 | 9.47E-02 | 0.00E+00 | -9.32E-02 |
| POCP | [kg ethene-eq.] | 5.75E-01 | -7.25E-03 | 2.41E-04 | 0.00E+00 | 2.41E-04 | -7.32E-03 | 1.82E-02 | 0.00E+00 | -5.59E-01 |
| ADPE | [kg Sb-eq.] | 1.32E-04 | 6.74E-07 | 7.63E-08 | 0.00E+00 | 7.63E-08 | 6.81E-07 | 1.37E-03 | 0.00E+00 | -2.48E-03 |
| ADPF | [MJ] | 1.77E+04 | 1.10E+02 | 1.25E+01 | 0.00E+00 | 1.25E+01 | 1.11E+02 | 3.31E+02 | 0.00E+00 | -1.05E+04 |
| Caption | GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources | | | | | | | | | |

| RESOURCE USE PER TON | | | | | | | | | | |
|----------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| PERE | [MJ] | 1.52E+03 | 6.42E+00 | 7.26E-01 | 0.00E+00 | 7.26E-01 | 6.49E+00 | 5.52E+01 | 0.00E+00 | 9.11E+02 |
| PERM | [MJ] | 5.88E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | [MJ] | 1.52E+03 | 6.42E+00 | 7.26E-01 | 0.00E+00 | 7.26E-01 | 6.49E+00 | 5.52E+01 | 0.00E+00 | 9.11E+02 |
| PENRE | [MJ] | 1.83E+04 | 1.11E+02 | 1.26E+01 | 0.00E+00 | 1.26E+01 | 1.13E+02 | 3.79E+02 | 0.00E+00 | -1.02E+04 |
| PENRM | [MJ] | 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 |
| PENRT | [MJ] | 1.83E+04 | 1.11E+02 | 1.26E+01 | 0.00E+00 | 1.26E+01 | 1.13E+02 | 3.79E+02 | 0.00E+00 | -1.02E+04 |
| SM | [kg] | 2.43E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | [MJ] | 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 |
| NRSF | [MJ] | 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 |
| FW | [m ³] | 2.68E+00 | 7.48E-03 | 8.46E-04 | 0.00E+00 | 8.46E-04 | 7.56E-03 | 2.18E-01 | 0.00E+00 | -5.18E+00 |
| Caption | PERE = Use of renewable primary energy excluding renewable primary energy resources 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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | |

| WASTE CATEGORIES AND OUTPUT FLOWS PER TON | | | | | | | | | | |
|---|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| HWD | [kg] | 9.89E-05 | 5.16E-06 | 5.83E-07 | 0.00E+00 | 5.83E-07 | 5.21E-06 | 3.32E-08 | 0.00E+00 | 2.80E-06 |
| NHWD | [kg] | 2.42E+01 | 1.77E-02 | 2.00E-03 | 0.00E+00 | 2.00E-03 | 1.78E-02 | 2.59E+00 | 0.00E+00 | 1.23E+02 |
| RWD | [kg] | 1.98E-01 | 2.06E-04 | 2.32E-05 | 0.00E+00 | 2.32E-05 | 2.08E-04 | 3.95E-04 | 0.00E+00 | -4.02E-04 |
| CRU | [kg] | 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 |
| MFR | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.91E+02 | 0.00E+00 | 0.00E+00 |
| MER | [kg] | 6.19E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E+01 | 0.00E+00 | 0.00E+00 |
| EEE | [MJ] | 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 |
| EET | [MJ] | 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 |
| Caption | HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy | | | | | | | | | |

Product 2: Galvanised GSY BEAM®

| ENVIRONMENTAL IMPACTS PER TON | | | | | | | | | | |
|-------------------------------|---|----------|-----------|----------|----------|----------|-----------|----------|----------|-----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| GWP | [kg CO ₂ -eq.] | 1.88E+03 | 8.18E+00 | 6.34E-01 | 0.00E+00 | 6.34E-01 | 8.26E+00 | 2.27E+01 | 0.00E+00 | -1.12E+03 |
| ODP | [kg CFC11-eq.] | 6.73E-12 | 2.04E-15 | 2.30E-16 | 0.00E+00 | 2.30E-16 | 2.06E-15 | 3.05E-06 | 0.00E+00 | -2.61E-12 |
| AP | [kg SO ₂ -eq.] | 4.32E+00 | 2.08E-02 | 2.40E-03 | 0.00E+00 | 2.40E-03 | 2.10E-02 | 2.40E-01 | 0.00E+00 | -1.80E+00 |
| EP | [kg PO ₄ ³⁻ -eq.] | 4.85E-01 | 4.93E-03 | 5.45E-04 | 0.00E+00 | 5.45E-04 | 4.97E-03 | 9.34E-02 | 0.00E+00 | -9.25E-02 |
| POCP | [kg ethene-eq.] | 5.61E-01 | -7.25E-03 | 2.41E-04 | 0.00E+00 | 2.41E-04 | -7.32E-03 | 1.78E-02 | 0.00E+00 | -5.58E-01 |
| ADPE | [kg Sb-eq.] | 2.76E-04 | 6.74E-07 | 7.63E-08 | 0.00E+00 | 7.63E-08 | 6.81E-07 | 1.37E-03 | 0.00E+00 | -2.48E-03 |
| ADPF | [MJ] | 1.72E+04 | 1.10E+02 | 1.25E+01 | 0.00E+00 | 1.25E+01 | 1.11E+02 | 3.23E+02 | 0.00E+00 | -1.05E+04 |
| Caption | GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources | | | | | | | | | |

| RESOURCE USE PER TON | | | | | | | | | | |
|----------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| PERE | [MJ] | 1.49E+03 | 6.42E+00 | 7.26E-01 | 0.00E+00 | 7.26E-01 | 6.49E+00 | 5.37E+01 | 0.00E+00 | 9.38E+02 |
| PERM | [MJ] | 5.88E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | [MJ] | 1.49E+03 | 6.42E+00 | 7.26E-01 | 0.00E+00 | 7.26E-01 | 6.49E+00 | 5.37E+01 | 0.00E+00 | 9.38E+02 |
| PENRE | [MJ] | 1.78E+04 | 1.11E+02 | 1.26E+01 | 0.00E+00 | 1.26E+01 | 1.13E+02 | 3.70E+02 | 0.00E+00 | -1.02E+04 |
| PENRM | [MJ] | 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 |
| PENRT | [MJ] | 1.78E+04 | 1.11E+02 | 1.26E+01 | 0.00E+00 | 1.26E+01 | 1.13E+02 | 3.70E+02 | 0.00E+00 | -1.02E+04 |
| SM | [kg] | 2.43E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | [MJ] | 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 |
| NRSF | [MJ] | 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 |
| FW | [m ³] | 2.78E+00 | 7.48E-03 | 8.46E-04 | 0.00E+00 | 8.46E-04 | 7.56E-03 | 1.62E-01 | 0.00E+00 | -5.16E+00 |
| Caption | PERE = Use of renewable primary energy excluding renewable primary energy resources 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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | |

| WASTE CATEGORIES AND OUTPUT FLOWS PER TON | | | | | | | | | | |
|---|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Parameter | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
| HWD | [kg] | 4.10E-05 | 5.16E-06 | 5.83E-07 | 0.00E+00 | 5.83E-07 | 5.21E-06 | 0.00E+00 | 0.00E+00 | 2.84E-06 |
| NHWD | [kg] | 2.36E+01 | 1.77E-02 | 2.00E-03 | 0.00E+00 | 2.00E-03 | 1.78E-02 | 0.00E+00 | 0.00E+00 | 1.23E+02 |
| RWD | [kg] | 1.91E-01 | 2.06E-04 | 2.32E-05 | 0.00E+00 | 2.32E-05 | 2.08E-04 | 0.00E+00 | 0.00E+00 | 3.69E-04 |
| CRU | [kg] | 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 |
| MFR | [kg] | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.91E+02 | 0.00E+00 | 0.00E+00 |
| MER | [kg] | 6.11E+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 |
| EEE | [MJ] | 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 |
| EET | [MJ] | 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 |
| Caption | HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy | | | | | | | | | |

Checked and approved by



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