Westcotec signs: life cycle carbon footprint

Work in progress study: interim results, EPDs to follow in later Q4 2026

About this study

This is a work in progress study. It is a cradle-to-grave life cycle assessment of eight Westcotec electronic road sign variants, following EN 15804+A2 and PCR 2019:14 of the International EPD System. Initial (unverified) results show climate change (GWP-total) for one sign over a 15-year reference service life, in kg CO2 eq. Verified Environmental Product Declarations (EPDs) will follow in later Q4 2026.

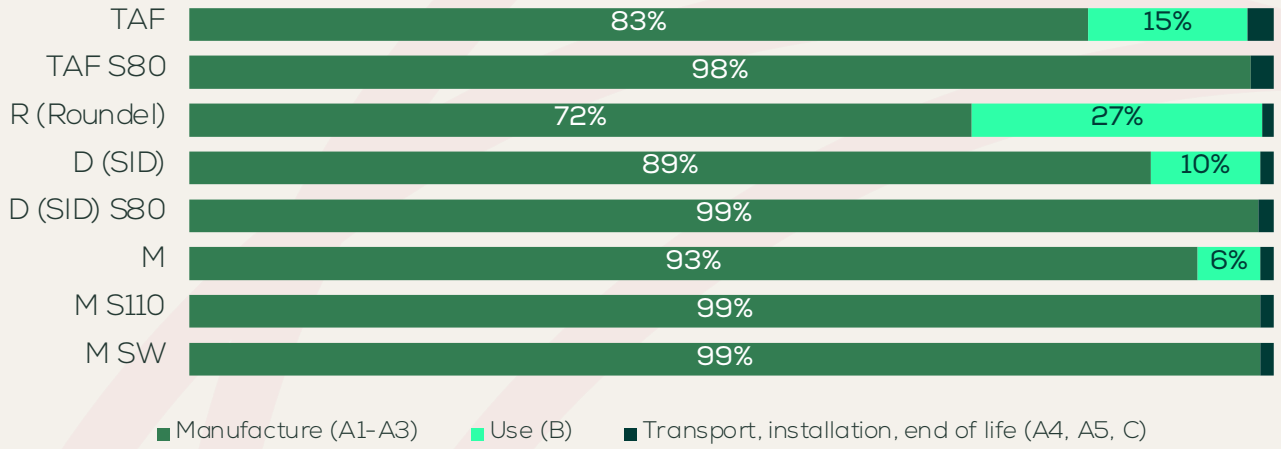
Key messages

- Raw material production and manufacturing (A1-A3) is 72% to 99% of each sign's climate change potential footprint.
- For the mains signs, electricity use over 15 years adds 6% to 27% to the life cycle impact (based on a UK residual mix). The solar variants (S80, S110, SW) use no mains electricity but have more materials, so a larger manufacturing footprint.
- Main hotspots: electronic boards (R (Roundel), D (SID) and M), the aluminium case (TAF and M), manufacturing electricity (TAF) and the solar equipment (TAF S80).

Life cycle stages

A1-A3 manufacture, A4 transport, A5 installation, B use, C1-C4 end of life.

Climate change footprint contribution (% of total)



Sign	Mass (kg)	kg CO2 eq. per sign	kg CO2 eq. per kg of sign
TAF	3.8	152.9	40.2
TAF S80	25.6	365.1	14.3
R (Roundel)	4.8	392.7	81.8
D (SID)	13.0	1044.9	80.4
D (SID) S80	34.8	1220.2	35.1
M	29.7	1982.0	66.7
M S110	54.4	2210.8	40.6
M SW	71.0	2318.3	32.7

Work in progress study: interim results, not yet verified. EPDs to follow in later Q4 2026. Climate change (GWP-total) for modules A1-A3, A4, A5, B and C1-C4; module D is not included. Per kg values use the mass of one unit. S80 = solar 80W, S110 = solar 110W, SW = solar and wind. Background data: ecoinvent v3.12 (EN 15804+A2).