

GCCA EPD TOOL · GUIDE 3 OF 7

Plant data checklist

What to collect before you open the tool, who in your business holds it, and the traps that send an EPD back from the verifier.

Most of this data already exists in your process, batching or ERP system. The work is assembling it for one product, over one representative period, per declared unit, with evidence attached. Collect it once and the next EPD takes a fraction of the time.

The period and the unit. Use a recent 12-month average unless you have a good reason not to, and record the exact start and end dates: the tool needs them for the digital EPD. Then express everything per declared unit: per tonne of clinker, cement or aggregate; per m³ of concrete; per declared unit of precast. Divide by the production of *this* product, not total site output.

1. Product and site

Held by: product management, quality control, plant management.

Item	Notes
☐ Product name and code	Name must be unique in the tool. Use your catalogue reference as the code.
☐ Production site, capacity, manufacturer, address	Printed on the self-declaration.
☐ Country of production	Fixed once the record exists; drives electricity, transport, fuel and clinker defaults.
☐ Data validity period and "valid until" year	Start and end date of the inventory data; both are required for the ILCD+EPD export.
☐ Cement: constituents other than clinker	Limestone, slag, fly ash, calcined clay, silica fume. Used in the recarbonation calculation.
☐ Concrete and precast: strength class and density; cement strength class	Drive recarbonation and every volume-to-mass conversion.
☐ Precast: concrete volume per declared unit	Excluding insulation, void formers, finishes and lifting or fixing inserts.

2. Materials and their transport (A1-A2)

Held by: procurement, logistics, mix design, quality control.

Item	Notes
☐ Recipe: every input material per declared unit	Primary raw materials, secondary materials and co-products, water, additives and admixtures.
☐ Clinker or cement source	Your own tool record, a supplier's background report, an imported third-party EPD, or the default.
☐ Secondary materials: allocation factor where the PCR requires one	Economic allocation for slag, fly ash and similar co-products. You calculate it; the tool has a field for it.
☐ Reinforcement and inserts (precast)	Steel content drives both A1 and end-of-life recovery.
☐ Packaging per declared unit	Bags, pallets, film, with their own transport. Outside the mass balance but needed for A5 waste and biogenic carbon.
☐ Transport per material: mode and distance	Truck, rail, ship, barge. Two supply locations for one material means two separate entries. A material can have more than one leg.
☐ Suppliers' EPDs	Product name, reference unit, mass per unit, validity, category, indicator results. Check the PCR and indicator set match before relying on them.

3. Manufacturing (A3)

Held by: energy management, process engineering, environmental management, finance (utility invoices).

Item	Notes
☐ Grid electricity per declared unit	Metered, not modelled from installed capacity.
☐ Electricity mix by source, and voltage level	The PCR sets the order: 1) your supplier's specific mix backed by a Guarantee of Origin or similar, 2) the supplier's residual mix, 3) the national residual mix. The default regional average is not acceptable for a verified EPD. Percentages by coal, oil, gas, biomass, waste, nuclear, hydro, geothermal, solar, wind.
☐ Electricity produced on site	Solar, wind or geothermal kWh per declared unit, separately from purchased power.
☐ Kiln fuels, primary and secondary, with transport	Quantity per declared unit. For each secondary fuel the biogenic fraction (%). Where you have laboratory values, the lower heating value and CO ₂ emission factor to override the defaults.
☐ Kiln emissions (clinker)	Calcination CO ₂ and fossil fuel-combustion CO ₂ per declared unit, plus any measured air emissions (NO _x , SO ₂ , dust, HCl, HF, metals, dioxins).
☐ Non-kiln fuels	Gas for drying, diesel in stationary plant, and similar.
☐ On-site transport fuels	Diesel and gasoline in loaders, quarry trucks and internal haulage, with their own supply distance.
☐ Water and ancillary materials	Water by source; grinding aids, explosives, refractories, lubricants.
☐ Co-products: excess electricity and heat exported	Feed module D credits; need metering or contracts.
☐ Precast: storage duration and conditions	Exposed surface and exposure class drive early recarbonation.

4. Waste and other outputs (A3)

Held by: environmental management, waste contractors' returns.

Item	Notes
☐ Non-hazardous waste by route, with transport	Landfill, incineration, wastewater.
☐ Hazardous waste by route, with transport	Incineration, underground deposit.
☐ Components for re-use; materials or waste to recycling; materials for energy recovery	Reported as indicators in their own right, so they need their own figures. Recycling flows take a transport distance.

5. Downstream (A4 to D)

Held by: logistics, technical services. Concrete and precast only. Much of this is defaulted; only the defaults are justified with references in the LCA model report, so change them only with better, evidenced data.

Item	Notes
☐ Delivery distance and mode to site; mixing-truck fuel	A typical or contract-average distance is acceptable if stated. Diesel, CNG or LPG consumption of mixing trucks if known.
☐ Installation: losses, electricity, diesel, water, wastewater	Default 3% concrete losses. Change only with site data.
☐ Packaging waste routes	Percentage to incineration, percentage with energy recovery.
☐ Use stage: recarbonation approach and inputs	Type of construction for the default approach; service life, exposed surface per declared unit and exposure conditions for the calculated approach.
☐ End of life: recycling rate, incineration and energy recovery shares	Demolition and transport are fixed in the model. End-of-life recarbonation approach for C3 and C4.

Evidence to keep with the file

- Utility invoices and meter readings for the data period.
- Electricity origin certificate or supplier residual-mix statement.
- Fuel analyses supporting biogenic fractions, heating values and emission factors.
- Delivery notes or transport contracts supporting distances and modes.
- Mix designs or production recipes as issued, with revision dates.
- Supplier EPDs and datasheets used as inputs.
- Waste contractor returns for the period.
- A short note explaining any figure that is not a direct measurement.

Six traps that cost you a verification round

- **Mixing periods.** Energy from one year and production from another gives a plausible-looking but wrong intensity.
- **Annual totals instead of per-unit figures.** Always divide by the production of the declared product.
- **The default electricity mix.** Not accepted for a verified EPD. Get the supplier mix or the residual mix, with evidence.
- **Secondary fuels without a biogenic fraction.** The tool needs it; the verifier will ask where it came from.
- **Forgetting internal transport and rehandling.** Small, but a verifier will notice its absence.
- **No audit trail.** If you cannot say where a number came from, expect to be asked to prove it twice.

Do it once, reuse it often. Build this checklist into your annual data cycle and one plant's EPD set becomes a template for the rest. Producers who collect centrally typically move from months to days on their second round. Questions: epdtool@gccassociation.org.