



CO₂-footprint of powder coatings

The CO₂ footprint of powder coatings is depending on various parameters, such as the color or gloss level of the surface. In the form of an environmental product declaration (EPD = Environmental Product Declaration) it is possible to determine the CO₂ footprint and have it verified by independent testing bodies. These declarations provide transparent, objective information about the environmentally relevant properties of a product.

The Association of the German Paint Industry (VdL) has created EPDs for polyester, hybrid and epoxy powder coatings, which reflect worst-case values from various companies and therefore tend to have higher CO₂ values. Since environmental product declarations play a central role in the certification of sustainable buildings, especially in the architecture and construction sector, we have calculated our own EPDs for the TIGER Drylac® Series 14, 29, 58, 59, 67, 68 and 75.

Overview: CO₂ footprint and links to download the EPDs

Powder coating system	CO ₂ -footprint [kg CO ₂ , eq/kg]
TIGER-Drylac® Series 14, 29, 58, 59, 67, 68 	3,64
Polyester (VdL) 	4,48
Hybrid (VdL) 	4,96
Epoxy (VdL) 	6,38
TIGER Drylac® Series 75 	14,10



Greenhouse potential as the most important value

The CO₂ footprint is specified in the EPD as Global Warming Potential. The value A1-A3 (Cradle to Gate) is usually requested. This can be found in the Results of the LCA section.

5. LCA: Results

The following table presents the LCA results for a declared unit of 1 kg TIGER Drylac® polyester/primid powder coating. TIGER Series 67, fine texture, RAL 7016 powder coating is declared as a worst-case representation of TIGER Drylac® Polyester/Primid series produced in Austria.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the 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	MND	MND	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 kg TIGER Series 67 fine texture RAL 7016.

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ eq	3.64E+00	0	3E-03	0	2.25E+00	0

