








# CO<sub>2</sub>-footprint of powder coatings

The CO<sub>2</sub> 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 CO<sub>2</sub> 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 average values from various companies and therefore tend to have higher CO<sub>2</sub> 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: CO<sub>2</sub> footprint and links to download the EPDs

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



# Greenhouse potential as the most important value

The CO<sub>2</sub> 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 <sub>2</sub> eq | 3.64E+00 | 0           | 3E-03         | 0                      | 2.25E+00              | 0                          |           |                  |          |   |  |

