Eco Report

Product: Dura Composites Pultrusion

Date: 9/27/2021

General Information

Functional unit

This Eco Report gives insights into the environmental impact of 1 Dura Composites Pultrusion of 1 kg.

Content declaration

The LCA that has resulted in this Eco Report entails a cradle-to-gate analysis. Listed are materials representing more than 1% mass of the product. This factsheet is valid for the year 2021. For a full report about the used materials, please visit Background and disclaimer.

Product: Dura Composites Pultrusion

Product description

Pultruded Glass Reinforced Polymer (GRP) products from Dura Composites provide an excellent guard against deterioration from industrial chemicals and environmental factors, making it a logical and cost-effective alternative to steel, aluminium, wood or other conventional materials. Pultrusion Standard BS EN 13706 defines two performance grades, namely E17 and E23, with our pultrusions designed to meet or exceed the higher performance E23 grade. Dura Pultruded Profiles provide the engineer with a high degree of design freedom and offers exceptional material properties for a wide range of applications. Our pultrusions are manufactured using isophthalic (ISO) resin as standard, with production lengths ranging from approximately 3 metres to 6 metre lengths by product. To accommodate all Dura Composites pultrusion products, this report refences the carbon footprint of each kilogram (kg) of GRP, and as such must be based on a rate of kg of CO2 per kg of GRP.

Process description

The manufacturing process is Pultrusion. Company specific data for waste and the use of energy, water and emissions for Pultrusion is used.

Product image

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LCA calculation rules

System boundary

This Eco Report includes the following product stages:

- Procurement, transport and processing of raw materials as well as processing of secondary raw materials serving as inputs
- Production of the composite parts

Background data

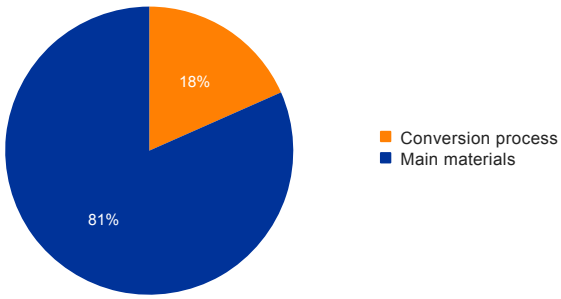
The relevant background datasets were taken from the databases in the SimaPro 8.0.2 software, supplemented by industry data obtained by completed questionnaires. For a full report about the used methodology and background data, please visit Background and disclaimer

Environmental score

Carbon footprint and Cumulative energy demand (CED)

The carbon footprint (calculated with GHG Protocol, v1.01) of 1 Dura Composites Pultrusion is equal to 3.13 of kg. The cumulative energy demand (calculated with CED 1.09) of 1 Dura Composites Pultrusion is equal to 56.86MJ. The following figures show the environmental impact of the product.

Carbon Footprint



Carbon Footprint:

3.13 kg

Cumulative energy demand:

56.86 MJ

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The International Reference Life Cycle Data Systems (ILCD)

The total score of 1 Dura Composites Pultrusion is calculated with the ILCD 2011 midpoint+ (v1.06) methodology.

Category	Amount	Unit
Climate change	3.08e+0	kg CO2 eq
Ozone depletion	2.97e-7	kg CFC-11 eq
Human toxicity, non-cancer effects	2.67e-7	CTuh
Human toxicity, cancer effects	8.52e-8	CTuh
Particulate matter	1.29e-3	kg PM2.5 eq
Ionizing radiation HH	1.43e-1	kBq U235 eq
Ionizing radiation E (interim)	2.45e-4	CTUe
Photochemical ozone formation	2.17e-2	kg NMVOC eq
Acidification	1.21e-2	molc H+ eq
Terrestrial eutrophication	2.60e-2	molc N eq
Freshwater eutrophication	9.46e-5	kg P eq
Marine eutrophication	2.45e-3	kg N eq
Freshwater ecotoxicity	9.26e+0	CTUe
Land use	1.99e+0	kg C deficit
Water resource depletion	1.46e-3	m3 water eq
Mineral, fossil & ren resource depletion	4.48e-5	kg Sb eq

This Eco Report is based on European Industry average figures. Thirdparty verification has not been performed and this report is not an Environmental Product Declaration (EPD). Environmental declarations from different programs may not be comparable.