

Trifilon Revo41

Natural Fiber Reinforced Recycled Polypropylene

CAS NR. PP: 9003-07-0

Product Description

Trifilon Revo41 is a natural fiber reinforced biocomposite that is engineered using recycled polypropylene from post-industrial processes. Trifilon Revo41 is specially designed for applications that require a higher stiffness than conventional, non-reinforced polypropylene. The recycled polypropylene combined with the higher content of natural fibers enable this material to have a low CO2 footprint compared to most other copolymers.

Carbon footprint: Methodology

Declared Unit:

The declared unit is 1 kg of Revo41 in granulate form.

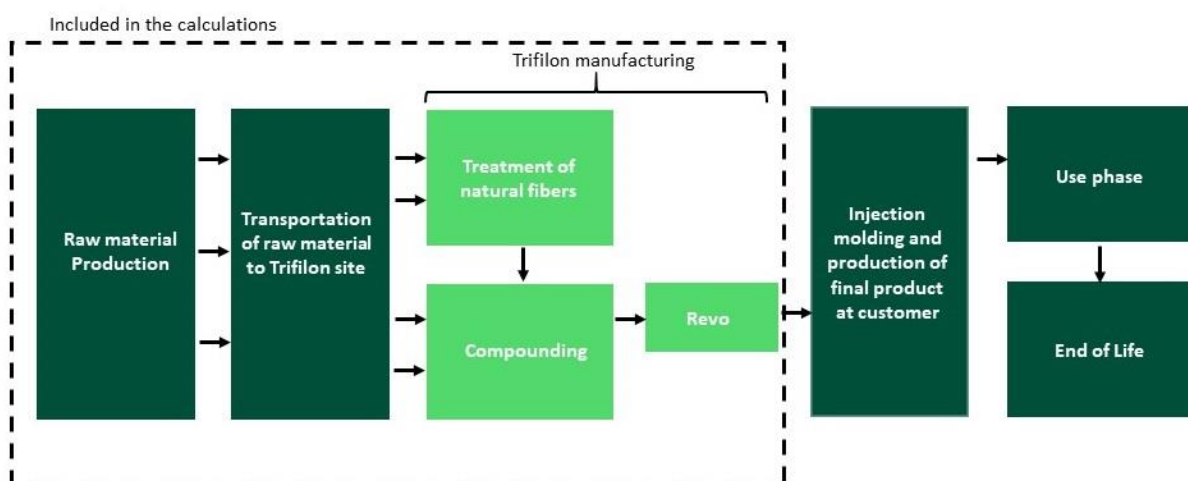
System Boundary:

The scope is cradle-to-factory gate including the lifecycle stages: raw material production, transportation of raw material and manufacturing. The system boundaries are described in the system diagram below.

Data and method:

The applied carbon footprint methodology is consistent with ISO 14040/44:2006 standard. Supplier-specific life-cycle data has been prioritized when calculating the carbon footprint. Where supplier-specific data has not been available, generic data from Ecoinvent 3.7.1 (update 2020) and PlasticsEurope(2014) has been used. For manufacturing processes completed at Trifilon, inhouse data has been collected during 2020.

System Diagram



The methodology and the calculation procedure are reasonable and scientifically correct according to LCA methodology. Reviewed by © IVL Swedish Environmental Research Institute 2020

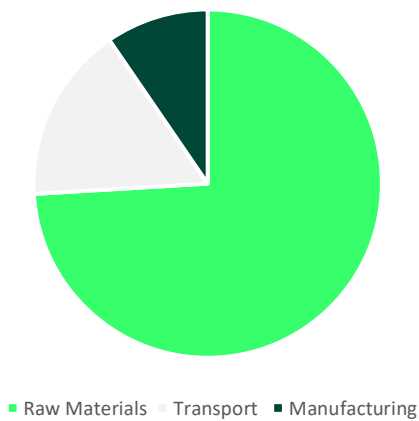
Carbon footprint: Results

Global Warming potential (GWP)

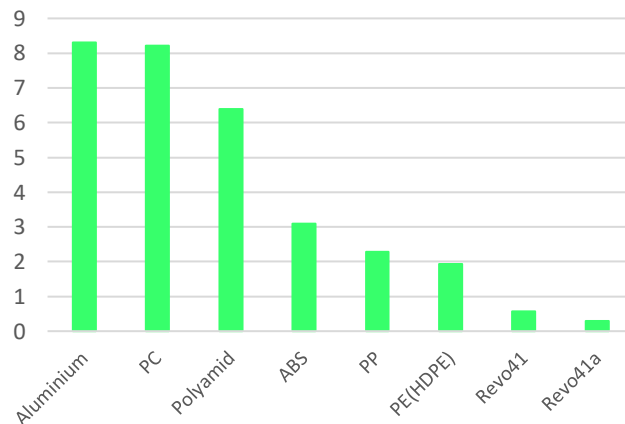
Carbon Footprint (cradle-to-gate)	0,57 (0,29 ^a)	kg CO ₂ -eq.
Raw materials	0,42 (0,14 ^a)	kg CO ₂ -eq.
Transport	0,09	kg CO ₂ -eq.
Manufacturing	0,05	kg CO ₂ -eq.
Stored biogenic CO ₂	-0,28	kg CO ₂ -eq.

^aTotal GWP including the CO₂ uptake (stored biogenic CO₂)

CO₂ footprint Distribution



CO₂ footprint Comparison (kg CO₂/kg)



Data retrieved from Ecoinvent 3.7.1 (update 2020) and PlasticsEurope (2014)

Raw Material Sourcing

The natural fibers used to manufacture Revo41 come from industrial hemp plants that are grown on sustainable EU farms. Trifilon only sources hemp fiber that is certified according to ISCC PLUS (International Sustainability and Carbon Certification). The recycled polypropylene (PIR) used in the making of Revo41 is sourced from EuCertPlast certified recyclers from northern Europe.



EuCertPlast