PRODUCT CARBON FOOTPRINT

according to ISO 14067, ISO 14040 and ISO 14044

PVC COMPOUNDS

INEOS Compounds

ECOVIN

PCF holder:
INEOS Compounds Aycliffe Ltd
School Aycliffe Lande
DL5 6EA Newton Aycliffe
www.ineos.com

Life cycle assessor: PeoplePlanetProfit GmbH
Preparation date: 20.06.2023
Note: The LCA was calculated with the software Umberto LCA +. The method of preparation can be requested.

Validity period: 20.06.2028
Note on validity: These manufacturer-specific balances are valid for five years from the date of preparation.

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Summary

PCF holder	INEOS Compounds Aycliffe Ltd School Aycliffe Lande DL5 6EA Newton Aycliffe www.ineos.com
Life cycle assessor	PeoplePlanetProfit GmbH Gerberstrasse 7 88250 Weingarten
Designation	PVC compounds
Description and definition of the product	Description: PVC / Vinyl Acetate based record compound Colour: Various Opaque and Translucent Colours Application: Vinyl Record Characteristics: Easy Processing & Medium Flow Shape: Pellets

General Properties	Test method	Units	Value
Density	EN ISO 1183-1A	kg/m³	1.361
Melt Flow Index (MFI)		Mpa	0,9 – 1,5
Thermal stability (180 °C)	EN ISO 182-1	Min	30

Document number	-
Preparation date	20.06.2023
Validity period	20.06.2028
Objective	This balance is intended to report the Product Carbon Footprint of PVC compounds from INEOS Compounds (cradle to gate).

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Method and Notes

The method for the preparation of the PCF can be requested.

These manufacturer-specific balances are valid for five years from the date of preparation.

A comparison of the PCF values is possible in principle, but not recommended, as assumptions in the report, models and the balancing software can differ from each other.

The LCA was calculated with the software Umberto LCA + on the basis of ISO 14067, ISO 14040 and ISO 14044.

The method is documented in a background report. The LCA study includes the definition of the objective and the scope of the study, the life cycle inventory, the impact assessment and the interpretation.

Considered life cycle

In the PCF, the manufacturing phase was taken into account (cradle to gate).

Data base

The LCA data was collected by the INEOS Compounds Aycliffe Ltd and reviewed by PPP.

System boundaries

The system boundaries refer to the site in Newton Aycliffe, Great Britain. Outsourced processes were not present.

Functional / declared unit

The declared unit is 1 kg PVC compound.

The functional unit is as follows:

Product	Density
Control XM80758	1.37 ± 0.02 g/ml
Biovyn ECOV001	
Recycled Tyres ECOV Version 2	
Heavy Metal Free + Green Lubs ECOV Version 3	

Information modules

The following information modules or life cycle phases were considered were considered:

- Production A1 - A3

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Interpretation of results

The differences in the environmental impact of the products lie in the various intermediate products and raw materials used. Above all, the selection and use of the PVC (original versus bio-attributed) has an influence on this. ECOV version 3 has the lowest environmental impact because bio-attributed PVC is used and - compared to the other bio-attributed PVC compounds - no zinc-containing additive is used.

The main environmental impacts in the production of XM80758 are caused by the raw material PVC or its upstream chains. In the case of the Biovyn ECOV001, Recycled Tyres ECOV Version 2 and Heavy Metal Free + Green Lubs ECOV Version 3, the environmental impact is mainly due to the energy consumption for the production and transport of the intermediate products. Furthermore, the additives also have a moderate impact on the environmental impact of these products.

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Product carbon footprint over the life cycle of PVC compounds

	Manufacturing phase			Construction phase		Use phase						Disposal phase				
	Provision of raw materials	Transport	Production	Installation	Transport	Use	Inspection/maintenance/cleaning	Repair	Exchange/replacement	Operational energy use	Operational water use	Dismantling	Transport	Waste management	Landfill	Recycling potential
	X	X	X													

PCF – Product Carbon Footprint (ISO 14067)

ND: Not declared

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Control XM80758	Unit	Production A1 – A3	Transport A4	Installation/assembly A5	Usage B1	Inspection/Maintenance/ Cleaning B2	Repair B3	Replacement/Replacement B4	Improvement/Modernization B5	Operational energy use B6	Operational water use B7	Dismantling/demolition C1	Transport C2	Waste treatment C3	Elimination C4	Recycling potential D
PCF total	kg CO2 e	2.75E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF fossil	kg CO2 e	2.70E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF biogenic	kg CO2 e	1.02E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF land use	kg CO2 e	3.75E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF Aviation	kg CO2 e	2.46E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Biovyn ECOV001	Unit	Production A1 – A3	Transport A4	Installation/assembly A5	Usage B1	Inspection/Maintenance/ Cleaning B2	Repair B3	Replacement/Replacement B4	Improvement/Modernization B5	Operational energy use B6	Operational water use B7	Dismantling/demolition C1	Transport C2	Waste treatment C3	Elimination C4	Recycling potential D
PCF total	kg CO2 e	2.49E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF fossil	kg CO2 e	2.22E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF biogenic	kg CO2 e	7.77E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF land use	kg CO2 e	1.92E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF Aviation	kg CO2 e	9.17E-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Recycled Tyres ECOV Version 2	Unit	Production A1 – A3	Transport A4	Installation/assembly A5	Usage B1	Inspection/Maintenance/ Cleaning B2	Repair B3	Replacement/Replacement B4	Improvement/Modernization B5	Operational energy use B6	Operational water use B7	Dismantling/demolition C1	Transport C2	Waste treatment C3	Elimination C4	Recycling potential D
PCF total	kg CO2 e	2.39E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF fossil	kg CO2 e	2.12E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF biogenic	kg CO2 e	7.78E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF land use	kg CO2 e	1.92E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF Aviation	kg CO2 e	8.62E-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Heavy Metal Free + Green Lubs ECOV Version 3	Unit	Production A1 – A3	Transport A4	Installation/assembly A5	Usage B1	Inspection/Maintenance/ Cleaning B2	Repair B3	Replacement/Replacement B4	Improvement/Modernization B5	Operational energy use B6	Operational water use B7	Dismantling/demolition C1	Transport C2	Waste treatment C3	Elimination C4	Recycling potential D
PCF total	kg CO2 e	2.38E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF fossil	kg CO2 e	2.15E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF biogenic	kg CO2 e	1.02E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF land use	kg CO2 e	1.29E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF Aviation	kg CO2 e	8.77E-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Packaging (Applies to all)	Unit	Production A1 – A3	Transport A4	Installation/assembly A5	Usage B1	Inspection/Maintenance/ Cleaning B2	Repair B3	Replacement/Replacement B4	Improvement/Modernization B5	Operational energy use B6	Operational water use B7	Dismantling/demolition C1	Transport C2	Waste treatment C3	Elimination C4	Recycling potential D
PCF total	kg CO2 e	6.42E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF fossil	kg CO2 e	2.21E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF biogenic	kg CO2 e	-1.57E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF land use	kg CO2 e	2.75E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCF Aviation	kg CO2 e	1.56E-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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