

Jak na výpočet uhlíkové stopy?

Tatiana Trecáková

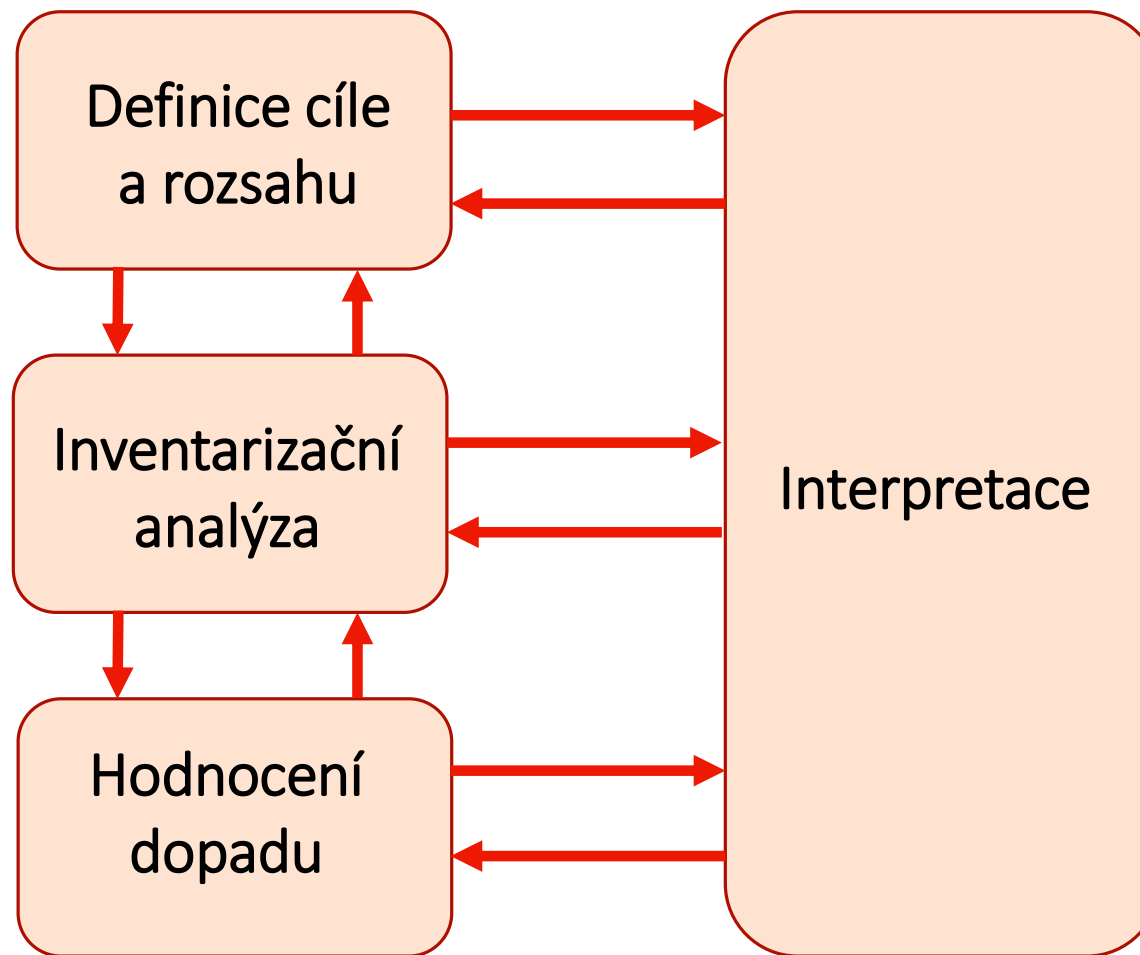
Národní konference kvality a udržitelnosti, MPO, 14. 9. 2023



LCA
Studio



Ústav udržitelnosti
a produktové ekologie
VŠCHT PRAHA



Strategie

GHG

Politiky

R&D

ESG

PEF

EPD

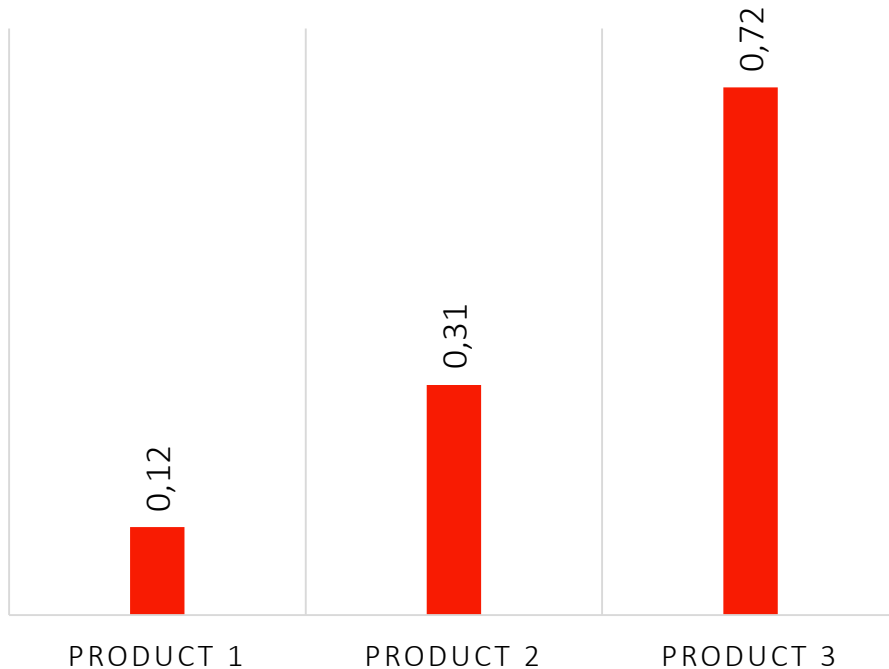
Ekodesign



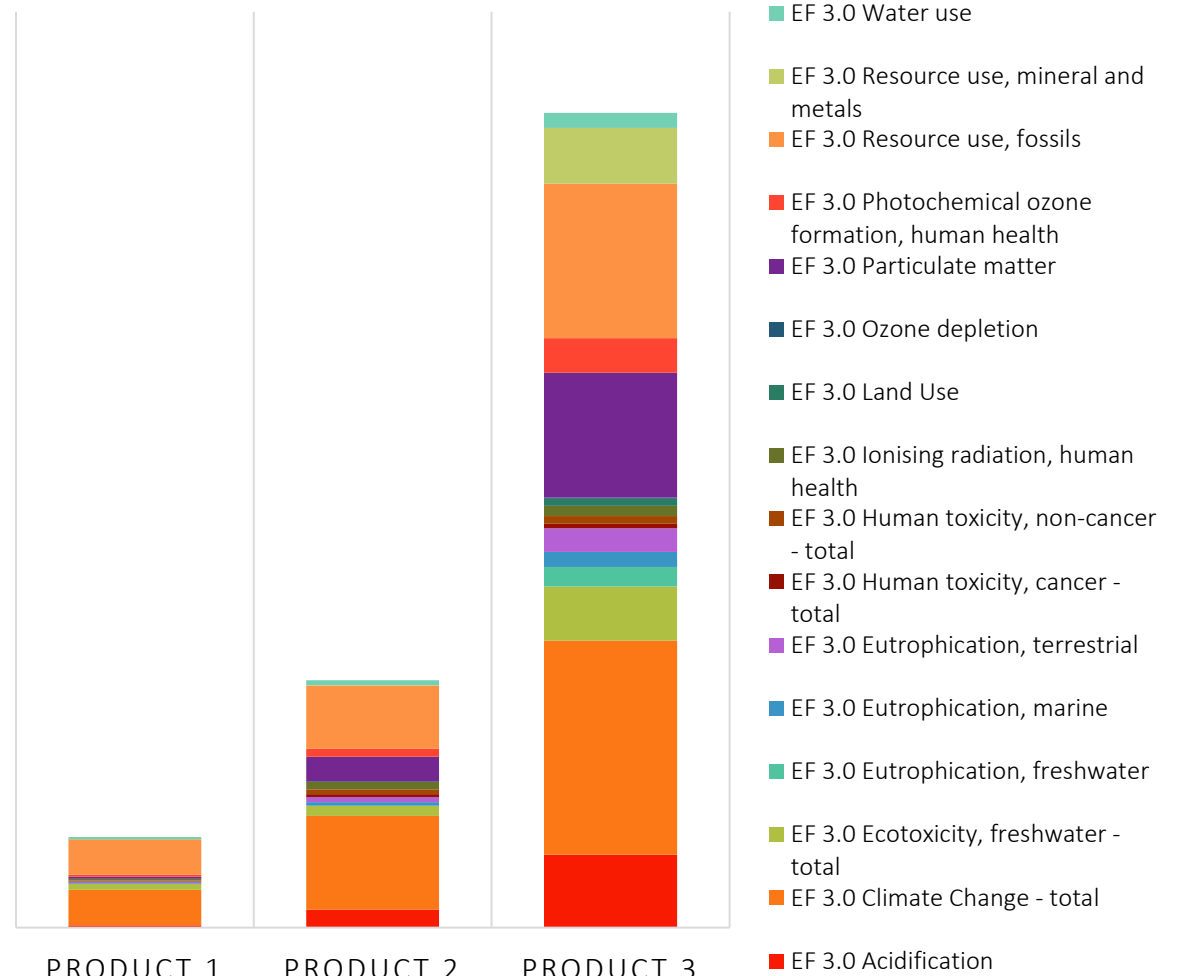
METHANE SOLAR RADIATION INDUSTRIAL REVOLUTION
COMBUSTION **GLOBAL WARMING**
CARBON DIOXIDE
RENEWABLE ENERGY **MITIGATION** **GREENHOUSE EFFECT** **EXTREME WEATHER** **HEAT WAVES**
STORMS ATMOSPHERE
CLIMATE CHANGE
EMISSIONS **DEForestation** **DISASTER**
DENIAL
SEA LEVEL RISE **GLACIERS** **DEATH** **DISASTER** **FOSSIL FUEL**
HUMAN INFLUENCE
ENERGY EFFICIENCY **GLOBAL AVERAGE TEMPERATURE** **TEMPERATURE ANOMALIES** **GREENHOUSE GAS**
DISASTER
OZONE

Uhlíková stopa a další environmentální ukazatele

UHLÍKOVÁ STOPA [KG CO₂ E.]



ENVIRONMENTÁLNÍ STOPA

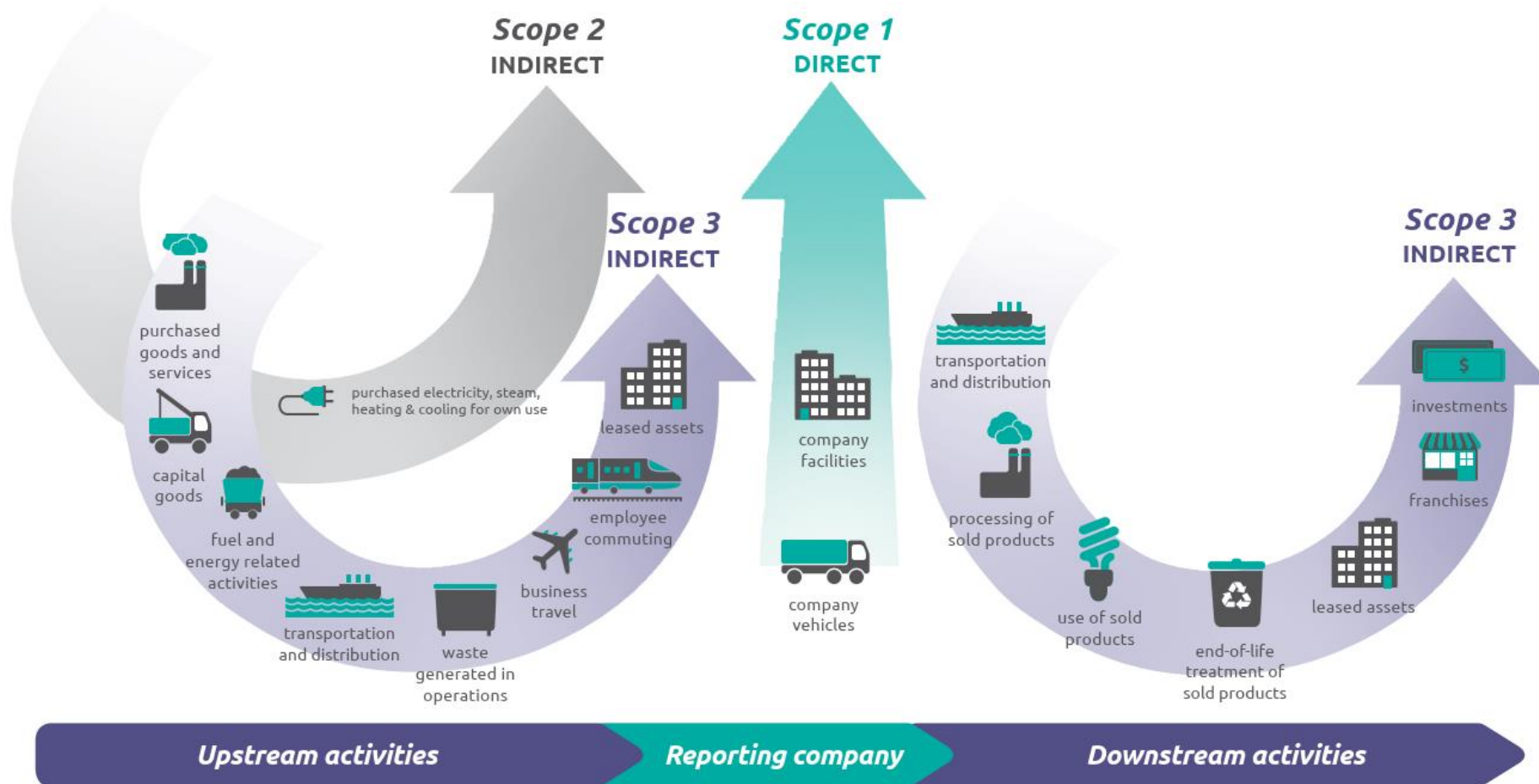


Metodiky pro výpočet uhlíkové stopy

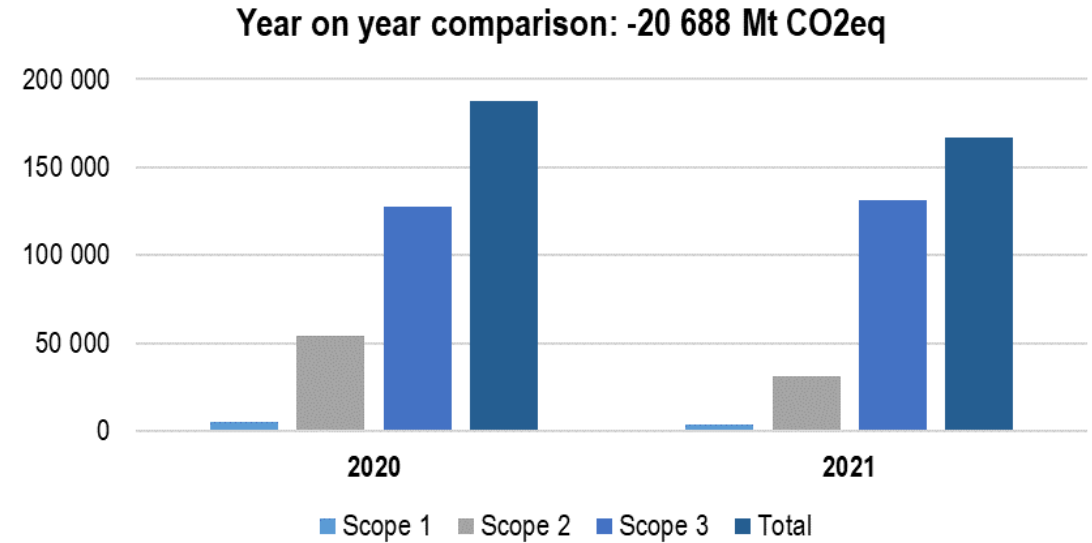
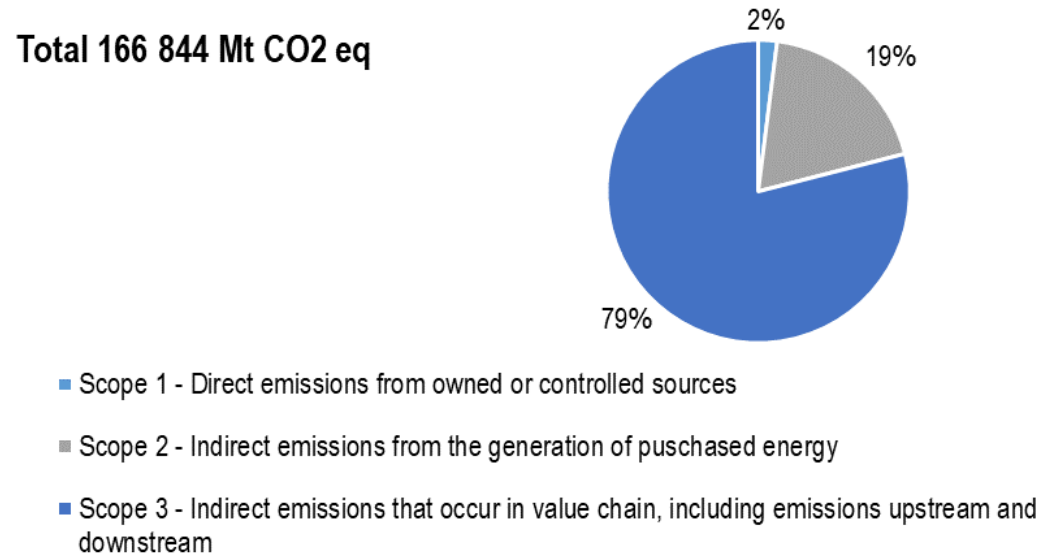
- uhlíková stopa organizace (ISO 14064/GHG protokol)
- uhlíková stopa produktu (ISO 14067)
- environmentální prohlášení o produktu (EPD)
- environmentální stopa produktu/organizace (PEF/OEF)
- environmentální ukazatele pro ESG reporting

Uhlíková stopa organizace

GHG



Uhlíková stopa organizace



Strategie

ESG reporting

Disclosure Requirements

ESRS 2 General disclosures

Disclosure requirement related to ESRS 2 GOV-3 Integration of sustainability-related performance in incentive schemes

Disclosure Requirement E1-1 – Transition plan for climate change mitigation

Disclosure Requirement related to ESRS 2 SBM-3 – Material impacts, risks and opportunities and their interaction with strategy and business model(s)

Disclosure requirement related to ESRS 2 IRO-1 – Description of the processes to identify and assess material climate-related impacts, risks and opportunities

Impact, risk and opportunity management

Disclosure Requirement E1-2 – Policies related to climate change mitigation and adaptation

Disclosure Requirement E1-3 – Actions and resources in relation to climate change policies

Metrics and targets

Disclosure Requirement E1-4 – Targets related to climate change mitigation and adaptation

Disclosure Requirement E1-5 – Energy consumption and mix

Energy intensity based on net revenue

Disclosure Requirement E1-6 – Gross Scopes 1, 2, 3 and Total GHG emissions

GHG Intensity based on net revenue

Disclosure Requirement E1-7 – GHG removals and GHG mitigation projects financed through carbon credits

Disclosure Requirement E1-8 – Internal carbon pricing

Disclosure Requirement E1-9 – Potential financial effects from material physical and transition risks and potential climate-related opportunities

EPD (Environmental Product Declaration)

EPD

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Pre-painted aluminium
from
METAL TRADE COMAX, a.s.



Programme: The International EPD® System, www.environdec.com
 Programme operator: EPD International AB
 EPD registration number: S-P-08072
 Publication date: 2023-01-12
 Valid until: 2028-01-11

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



Environmental Product Declaration

In accordance with ISO 14025:2006 for:

ε-caprolactam
from
Spolana s.r.o.



Programme: The International EPD® System, www.environdec.com
 Programme operator: EPD International AB
 EPD registration number: S-P-08833
 Publication date: 2023-03-20
 Valid until: 2028-03-19



Environmental performance

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Potential environmental impact

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL	
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	2.91E+00	3.31E+00	6.44E-02	6.28E+00
	Biogenic	kg CO ₂ eq.	1.30E-02	6.79E-03	-8.74E-05	1.97E-02
	Land use and land transformation	kg CO ₂ eq.	1.88E-04	1.02E-04	3.54E-04	6.44E-04
TOTAL	kg CO₂ eq.	2.92E+00	3.32E+00	6.46E-02	6.30E+00	
Ozone layer depletion (ODP)	kg CFC 11 eq.	4.25E-09	4.93E-12	1.03E-14	4.25E-09	
Acidification potential (AP)	kg mol H ⁺ eq.	2.87E-03	5.94E-03	6.48E-05	8.87E-03	
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	6.40E-06	1.78E-06	1.90E-07	8.37E-06
	Aquatic marine	kg N eq.	9.08E-04	1.60E-03	2.05E-05	2.53E-03
	Aquatic terrestrial	mol N eq.	9.62E-03	1.64E-02	2.48E-04	2.65E-02
Photochemical oxidant creation potential (POCP)	kg NMVOC eq.	3.91E-03	4.44E-03	5.77E-05	8.41E-03	
Abiotic depletion potential (ADP)	Metals and minerals	kg Sb eq.	4.88E-07	1.48E-07	5.35E-09	6.41E-07
	Fossil resources	MJ, net calorific value	7.52E+01	3.69E+01	8.63E-01	1.13E+02
Water deprivation potential (WDP)	m ³ world eq.	-2.59E-02	1.90E-01	6.19E-04	1.65E-01	

Use of resources

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL	
Primary energy resources - Renewable	Use as energy carrier	MJ, net calorific value	2.39E+00	1.64E+00	5.03E-02	4.08E+00
	Used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	TOTAL	MJ, net calorific value	2.39E+00	1.64E+00	5.03E-02	4.08E+00
Primary energy resources - Non-renewable	Use as energy carrier	MJ, net calorific value	7.52E+01	3.70E+01	8.65E-01	1.13E+02
	Used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	TOTAL	MJ, net calorific value	7.52E+01	3.70E+01	8.65E-01	1.13E+02
Net use of fresh water	m ³	5.07E-03	9.41E-02	5.76E-05	9.92E-02	

EPD obsahuje informace o uhlíkové stopě produktu

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

[The Sandwich Panels of thickness 140-160 mm with QuadCore Technology]

from
[Kingspan, a.s.]



Programme: The International EPD® System, www.environdec.com
 Programme operator: EPD International AB
 EPD registration number: S-P-07900
 Publication date: 2023-01-24
 Valid until: 2027-12-30

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

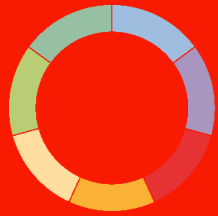


Využití metody Posuzování životního cyklu v praxi:

- Produkty
- Technologie
- Služby

- Porovnání dopadu alternativních řešení
- Slabá místa
- Potenciál pro zlepšení
- Ekodesign

SUPRE
SUSTAINABILITY
AND PRODUCT
ECOLOGY



**LCA
Studio**



VIZULO

Spolana



SKANSKA

GUMOTEX



SKUPINA ČEZ

fatra



PFN

JSP

HELUZ

TRIME