



EN15804:2012 Core EPD		Preliminary version. All rights reserved.		March 12, 2015	
Company	ROCKFON/ROCKWOOL International Hovedgaden 584 DK-2640 Hedehusene tel. +45 46 56 21 22 www.rockfon.com				
For	Rockfon - Tropic E				
Standard	Self-declared EPD based on the EN15804:2012		Type: Cradle-to-Gate with Options		
Issue date	12-03-2015				
Valid until	10-03-2020				
Product unit	1 m2 acoustic panels with a service life of 50 years				
Description	Thickness	Weight	α_w	Dnfw	Rw
	15 mm	2,1 kg/m2	0.95	-	-
Representative for	Rockfon products produced for Norway. This Core EPD covers all relevant variations of the product above (colors, sizes and edge profiles).				
Remarks	EPDs of construction products may not be comparable if they do not comply with the EN15804:2012 standard				

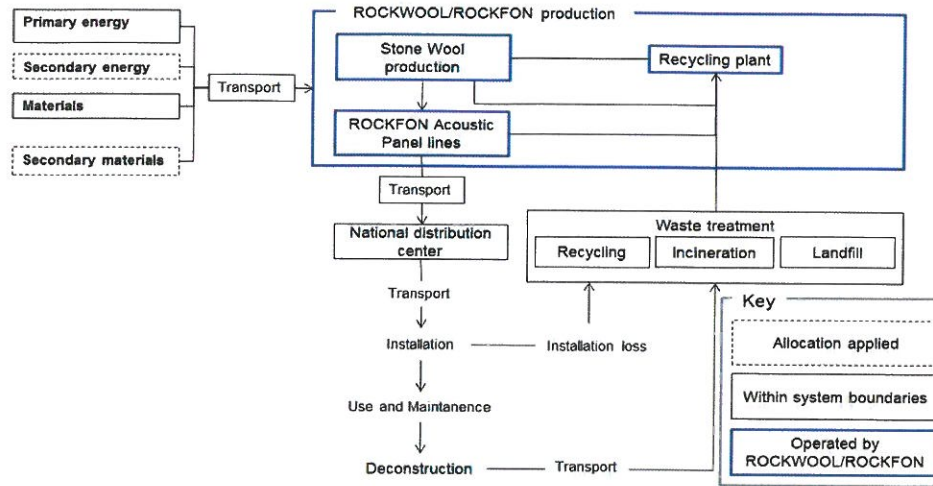
Demonstration of verification	
EN15804 serves as core PCR Third party verification of the declaration, according to ISO 14025 <input type="radio"/> Internal <input checked="" type="radio"/> External	
Third party verifier IVAM B.V. As a general rule, a comparison or evaluation of EPD data is only possible when all of the data records to be compared have been drawn up in accordance with EN 158084 and the building context and/or product-specific performance features are taken into consideration.	

Declaration of material content	
	All information related to the content and safety of our products can be obtained by contacting ROCKFON technical support.
Safety data sheet	In compliance with European chemicals regulation (REACH), ROCKFON acoustic ceiling solutions are defined as articles why a Safety Data Sheet is not required. The mineral wool core consists of fibres spun from melted minerals based on vulcanic mass, such as diabase or basalt, from recycled mineral wool and other secondary mineral resources. Rockwool mineral wool is safe to use and carries the EUCEB label. For more information please contact ROCKFON.
Substances considered under European Chemicals Regulation REACH	The product contains no substances as listed in Annex XIV and Annex XVII of REACH regulation No 1907/2006 or the Norwegian priority list (A20).



System boundaries and flow diagram

The process tree for mineral wool (material and energy inputs smaller than 1% excluded from flow chart)
 Note: the construction and use phase have not been considered



Environmental Parameter	Product stage	Delivery	Installation	Use and maintenance	End-of-life					Module D
Environmental profile	Unit	A1, A2, A3	A4	A5	B1 – B7	C1	C2	C3	C4	D
Global warming potential, GWP	kg CO2	2,96E+00	4,66E-01	6,05E-01	NR	NR	2,26E-02	3,00E-03	2,91E-02	-1,36E-01
Depletion potential of the stratospheric ozone layer, ODP	kg CFK-11	2,95E-07	8,32E-08	1,61E-08	NR	NR	4,02E-09	5,35E-10	6,68E-09	-2,23E-08
Acidification potential of land and water resources, AP	kg SO2	2,11E-02	1,85E-03	1,35E-03	NR	NR	8,92E-05	1,19E-05	1,50E-04	-2,13E-03
Eutrophication potential, EP	kg PO43-	3,05E-03	3,02E-04	2,29E-04	NR	NR	1,46E-05	1,94E-06	2,48E-05	-2,49E-04
Formation potential of tropospheric ozone	kg ethyl	1,14E-03	8,03E-05	7,62E-05	NR	NR	3,88E-06	5,16E-07	6,89E-06	-2,20E-04
Depletion of abiotic resources, elements	kg Sb	6,53E-06	1,65E-06	4,74E-07	NR	NR	7,99E-08	1,06E-08	7,87E-08	-2,69E-07
Depletion of abiotic resources, fossil fuels	MJ	5,85E+01	6,86E+00	3,05E+00	NR	NR	3,32E-01	4,42E-02	5,57E-01	-5,18E+00
Resource input (use of)										
Renewable primary energy, excluding renewable resources used as raw materials	MJ, ncv	7,81E+00	4,91E-02	-1,75E+00	NR	NR	2,38E-03	3,16E-04	3,64E-03	-7,47E-02
Renewable primary energy resources used as raw materials	MJ, ncv	4,25E+00	4,50E-02	2,39E-01	NR	NR	2,18E-03	2,90E-04	6,81E-03	-4,18E+00
Total renewable primary resources	MJ, ncv	1,21E+01	9,42E-02	-1,51E+00	NR	NR	4,56E-03	6,06E-04	1,04E-02	-4,25E+00
Non renewable primary energy, excluding resources used as materials	MJ, ncv	6,34E+01	6,98E+00	3,43E+00	NR	NR	3,38E-01	4,49E-02	5,67E-01	-5,88E+00
Non renewable primary energy used as raw materials	MJ, ncv	3,13E+00	0,00E+00	3,22E-02	NR	NR	0,00E+00	0,00E+00	0,00E+00	-2,01E+00
Total non renewable primary energy resources	MJ, ncv	6,65E+01	6,98E+00	3,46E+00	NR	NR	3,38E-01	4,49E-02	5,67E-01	-7,89E+00
Secondary material	kg	1,25E+00	0,00E+00	0,00E+00	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non renewable secondary fuels	MJ	3,55E-02	0,00E+00	2,13E-03	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Input of fresh water	m3	8,52E-02	1,50E-03	4,98E-03	NR	NR	7,26E-05	9,66E-06	3,70E-04	-3,66E-03
Waste categories (disposed)										
Hazardous waste disposed	kg	3,18E+00	1,35E-01	1,54E-01	NR	NR	6,54E-03	8,70E-04	9,44E-03	-4,65E-01
Non hazardous waste disposed	kg	3,81E-01	2,62E-01	6,91E-02	NR	NR	1,27E-02	1,69E-03	1,79E+00	-4,73E-02
Radioactive waste disposed	kg	1,29E-01	1,87E-03	6,70E-03	NR	NR	9,05E-05	1,20E-05	1,40E-04	-4,26E-03
Further output material flows										
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	3,59E-01	0,00E+00	2,15E-02	NR	NR	0,00E+00	0,00E+00	0,00E+00	2,96E-01
Materials for energy recovery	kg	0,00E+00	0,00E+00	1,67E-01	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported electric energy	kg	0,00E+00	0,00E+00	2,61E-01	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported thermal energy	kg	0,00E+00	0,00E+00	4,46E-01	NR	NR	0,00E+00	0,00E+00	0,00E+00	0,00E+00



[A4] Transport to building site		
Parameter		
Fuel type consumption of vehicle or vehicle type, e.g. long distance truck, boat etc.	l/km	Truck: Diesel, 0.043 litre per ton per km, by trailer Ship: Diesel, 0.0083 litre per ton per km (generic data fromecoinvent)
Distance	km	1451 km by truck; 10 km by ocean freight ship
Capacity utilisation (including empty returns)	%	Truck: 85% delivery; 0% for 25% of empty returns Ship: 1000 tons per load (generic data fromecoinvent)
Bulk density of transported products	kg/m3	Varies from 127,5 kg/m3 to 178 kg/m3 for heavier products and from 73 kg/m3 to 127 kg/m3 for lighter products
Volume capacity utilisation factor (factor = 1 or <1 or > 1 for compressed or nested packaged products		1

[A5] Installation of the product in the building	
Parameter	
Ancillary materials for installation	Not declared
Water use	None
Other resource use	None
Quantitative description of energy type and consumption during the installation process	Manual installation, so no energy consumption
Waste materials on the building site before waste processing, generated by the product's	6%
Output materials as result of waste processing at the building site	Packaging material and cut offs
Direct emissions to ambient air, soil and water	See emission certifications below

[B1-7] Use Stage
Not relevant

[C] End of life stage			
Processes			
Collection process	collected separately	kg	0,09
	collected with mixed construction waste	kg	1,78
Recovery system	for re-use	kg	0,00
	for recycling	kg	0,09
	for energy recovery	kg	0,00
Disposal	for thermal waste treatment	kg	0,00
	product of material for final disposition	kg	1,78
Further assumptions for scenario development	None		



Indoor air	
Considerations	There are no indoor air health quality related concerns for the use of Rockwool construction products.

ncv net calorific value

ND Not Declared

NR Not relevant

Additional environmental information not verified as part of the EPD	
Recycled content (preconsumer)	41% Recycled content calculated according to ISO 14021. Primarily post-industrial (pre-consumer waste).
End-of-life recycling/ Corporate Social Reporting	Extended Producer Responsibility Programs are operated by ROCKWOOL and/or ROCKFON in Denmark. The ROCKWOOL group report on Corporate Social Responsibility is available on-line at www.rockwool.com
Environmental management Systems	Products covered by this EPD are primarily produced in Cigacice (Poland), some in Roermond (Netherlands). Both facilities are certified after ISO 14001

Product Health	
Emissions	The product or product group is covered by the following 3rd. Party controlled emissions certificate(s): - Finnish M1 - Danish Indoor Climate Label
Mineral wool fibre	Certified bio-solubile, ROCKWOOL/ROCKFON Stone Wool fibres are assessed as substances free from Coarse fibres can cause itching on skin or foreign body effect in the upper respiratory system (mucous

Normative references			
EN	13501-1	2009	Fire classification of construction products and building elements Part 1: Classification using test data from reaction to fire tests
EN ISO	354	2003	Acoustics - Measurement of sound absorption in a reverberation room
EN ISO	10140	2010	Acoustics - Laboratory measurement of sound insulation of building elements
EN ISO	11654	1997/2013	Acoustics - Sound absorbers for use in buildings - Rating of sound absorption
EN	13964	2004	Suspended ceilings. Requirements and test methods

Core EPD and ECO-Link calculation module compiled and designed by



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Product specific EPD modelled in ECO-link calculation module by

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