GREENHOUSE GAS EMISSIONS PER TONNE JUTE FIBRE

Field operations*	41
Seeds*	2
Fertilizer*	306
Fertilizer - induced N_2O-emissions*	114
Pesticedes*	9
Fibre processing*	90
Fibre processing - felting process**	51
Manufacturing of panel, heating and cutting	153
Transportation in India, truck 2.500 km.***	250
Transportation from Kochi to Copenhagen, sea 14.000 km.****	140
Total emission	1.156
Stored carbon dioxide per tonne jute fibre*	1.330

One PANEL ZERO 4 cm. panel consist of 83,5% jute fibre and 16,5% natural latex.

Greenhouse gas emissions per tonne jute ibre / natural latex (weighted)	
Jute fibers, 83,5%	965,26
Natural latex, 16,5%	103,29
Total emission per tonne panel	1.069,55
Total emission per kg. panel	**1,07**
Stored carbon dioxide per tonne jute fibre / natural latex (weighted)	
Jute fibers, 83,5%	1.110,55
Natural latex, 16,5%	534,60
Stored carbon dioxide per tonne panel	1.645,15
Stored carbon dioxide per kg. panel	**1,65**
Net emission per tonne panel	**-577,00**
Net emission per kg. panel	**-0,58**

GREENHOUSE GAS EMISSIONS PER TONNE CONCENTRATED LATEX WITHOUT WATER

Greenhouse gas emissions per tonne concentrated latex (60% dry latex and 40% water) 1): 291,4

100% dry latex	486
Transportation from Kochi to Copenhagen, sea 14.000 km.****	140
Total emission	626
Stored carbon dioxide per tonne 100% dry latex 2)	3.240

Per m² panel - total weight 10,54 kg / m²	
Total emission per kg. panel	**11,28**
Stored carbon dioxide per kg. panel	**17,39**
Net emission per kg. panel	**-6,11**

* Nova-Institut GmbH, Carbon Footprint and Sustainability of Different Natural Fibres for Biocomposites and Insulation Material, 2015

** Machine used for felting, Fehrer V3, NL3. Capacity, 800 GSM, 500 m² per hour, power 25 kWh. 0,8 kg/m2*500 m² = 400 kg/h. Energi used, 2,5*25 kWh = 62,5 kWh. Indien: 0,82 kg CO_2/kWh*62,5 kWh = 51,25 kg CO_2

*** Emission truck, 100 gram CO_2 /T/km*2.500 km = 250 kg CO_2/T

**** 10 g CO_2/T/km×14,000 km = 140 kg CO_2/T

1) Usubharatana – Phungrassami: Carbon footprint of rubber products, (Received 16th Nov 2017; accepted 20th Feb 2018)

2) Calculated by Peter Dagø

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