Life Cycle Assessment (LCA) of Lindängens IP

Receiving pitch and
returning sand and rubber

Gothenburg 04.09.2024

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City of Malmö

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Why?

António Guterres
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July 2023 is set to be the hottest month ever recorded.

The consequences are tragic:

Children swept away by monsoon rains.

Families running from the flames.

Workers collapsing in scorching heat.

No more hesitancy or excuses.

#ClimateAction - now.

public.wmo.int/en/media/press...

3:47 PM · Jul 27, 2023

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Why?

Malmö: how big is the CO2 emission, when reinstalling a full-size artificial football field?

Malmö: NetZero City by 2030

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CO_2 emission calculations

DELIVERY AND RECYCLING OF PITCH FROM MALMÖ

Description	Weight in tonnes	CO_2e used in tonnes
Receiving pitch Transported from Malmö to Re-Match Turf Recycling (Herning)	226,5 (7850 m^2)	5,256
Amount of recycled sand (Quartz)	82,866	2,788
Amount of recycled rubber (SBR 0.8-2.5 mm)	73,936	2,516

The table shows a distribution of 41% (sand) and 37% (rubber granulates) of the total pitch weight.
This pitch contains more rubber and less sand than the average pitch that Re-Match receives.

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CO_2 emission calculations

RETURNING OF RECYCLED MATERIALS TO MALMÖ

Description	Weight in tonnes	CO_2e used in tonnes
Rubber (SBR 0.8-2.5 mm)	59	1,256
Sand (additional sand included)	133	2,832

Conclusion	Calculated CO2 emissions
Total CO2 emissions from de-installation, transport and unloading at Re-Match	5.366,6 kg
Total CO2 emissions from loading into production, production and incineration	25.607,45 kg
CO2 emissions from additional purchase and transport back to Malmö	5.002,79 kg

TOTAL CO_2E SPEND

35,9 TONNES FOR THIS SPECIFIC PITCH

Distance 342 km each way

0,05 ton/km*

** Dismantling and further processing of the plastic fibres are not included*

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The Process – Mechanical Recycling

No water – No Chemicals

Intake & Inbound Quality Control → Downsizing → Drying → Sieving → Separating → Product Quality Control

Turf input

Down-sizing · Drying · Separating · Cleaning

Sand · Rubber · Backing · Grass Fibre

What happens to the plastic?

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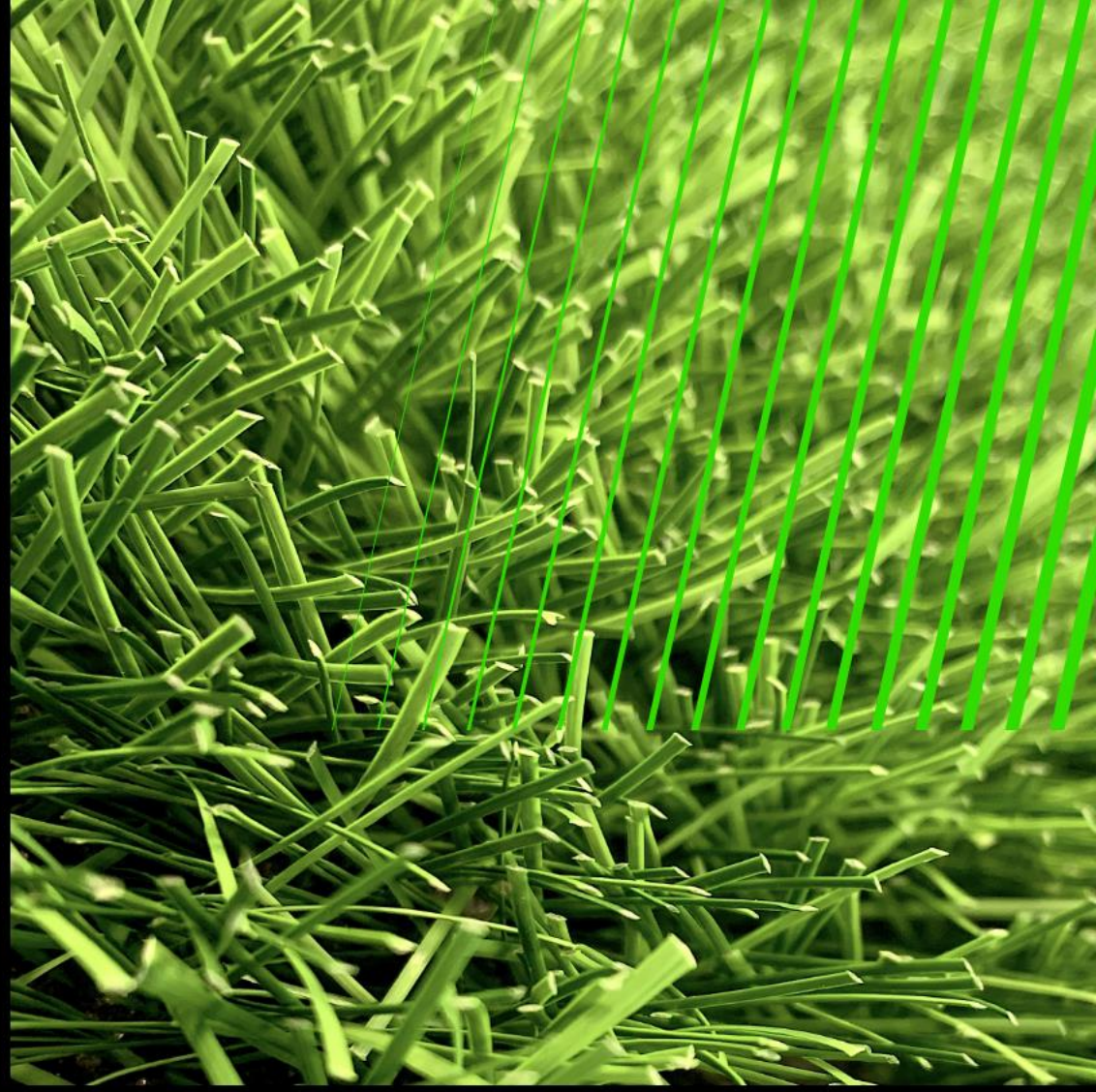
Edel Athmos Xero

Renewable turf system

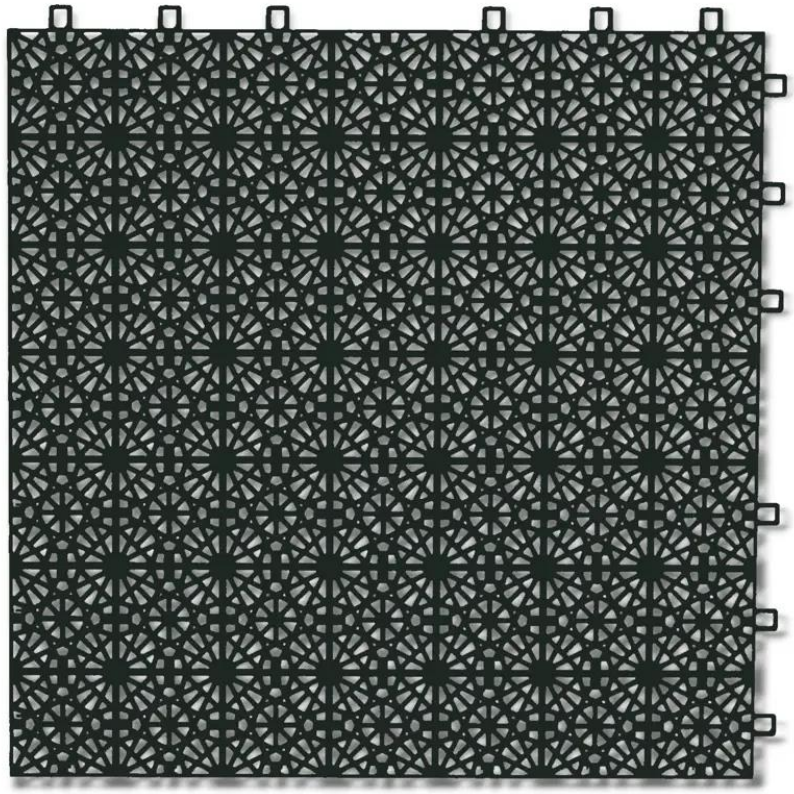
50%



Patent pending
'Turf-to-turf' technology

edelgrass.com

Bergo Ultimate PLUS™ by GreenMatter



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Elho Flower pots

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Re-Match **in a snapshot**

3 factories

Denmark

Netherland

France

Certified process

ETV

EU Cert Plast

ISCC Plus

ISO 9001

ISO 14001

+100

Employees

Thank you

Søren Østergaard

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