

CERTIFIED CIRCULAR PLASTIC



FROM DISCARDED ROPES AND NETS



PROBLEM

> 8.000.000.000 kg

More than 8 million tons of plastic enter the oceans each year. Ghost gear is the deadliest form of marine litter.



> 12.000.000.000 kg

There is even more plastic in agricultural land than in the oceans. Yearly over 12 million tons of plastic products are used in Europe.

SOLUTION



We transform old ropes and nets from fishing and farming that previously couldn't be recycled into Post-Consumer Recycled polypropylene and polyethylene, using our patented purification process.

AT HEALIX WE...



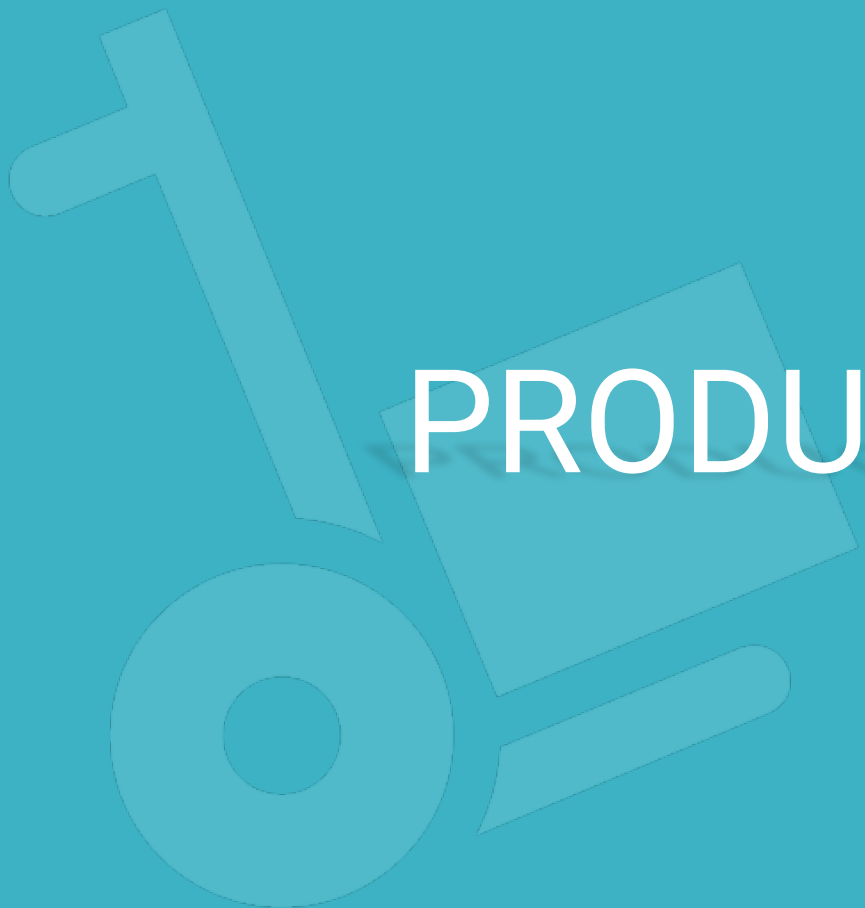
...**RESCUE** plastic waste from oceans and farmlands.

...**RETRIEVE** segregated streams from traceable sources.

...**RECYCLE** it to certified circular plastics using our advanced purification technology.

...**RETURN** it to the economy, enabling our customers to reduce their carbon footprint and use of virgin plastic.

**BY KEEPING PLASTIC WITHIN THE ECONOMY,
WE KEEP IT OUT OF THE ENVIRONMENT.**

The background features several overlapping, semi-transparent teal geometric shapes. These include a large L-shaped figure in the upper left, a tilted square in the center, a circle with a smaller concentric circle inside in the lower left, and a horizontal bar with a pointed end in the lower right. The word "PRODUCTS" is centered over these shapes.

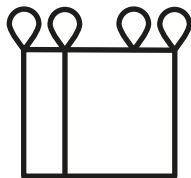
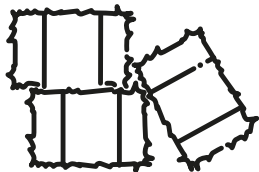
PRODUCTS

RECYCLED MATERIALS

Post Consumer Waste Streams

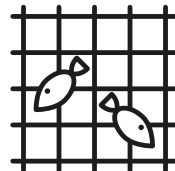


PP



MARINE ROPES / BALER TWINE /
BIG BAGS /

HDPE



TULIP NETS / NET WRAPS /
FISHING NETS /

RECYCLED MATERIALS



MARINE ROPES



BALER TWINE



BIG BAGS



TULIP NETS



NET WRAPS



FISHING NETS

COMPETITIVE ADVANTAGE



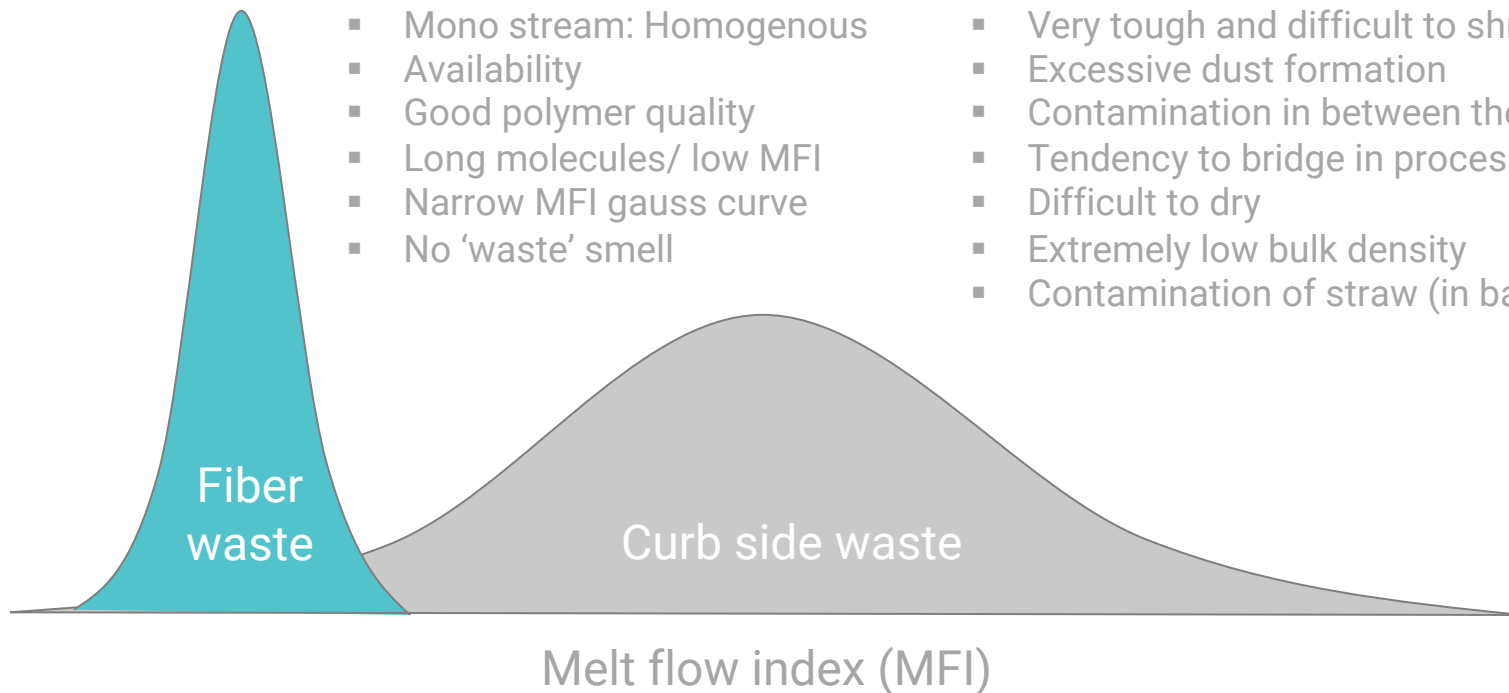
Post-consumer plastic fiber waste is a highly attractive but extremely difficult feedstock

Benefits of fiber waste

- Segregated at the source
- Mono stream: Homogenous
- Availability
- Good polymer quality
- Long molecules/ low MFI
- Narrow MFI gauss curve
- No 'waste' smell

Challenges of fiber waste

- Contamination of sand, stones and steel
- Very tough and difficult to shred
- Excessive dust formation
- Contamination in between the filaments
- Tendency to bridge in process
- Difficult to dry
- Extremely low bulk density
- Contamination of straw (in baler twine)



BUSINESS MODELS



Selling PP & HDPE regranulate for the open and closed loop market



Closed Loop

Supply regranulate made from used ropes and nets back to rope and net producers.



Open Loop

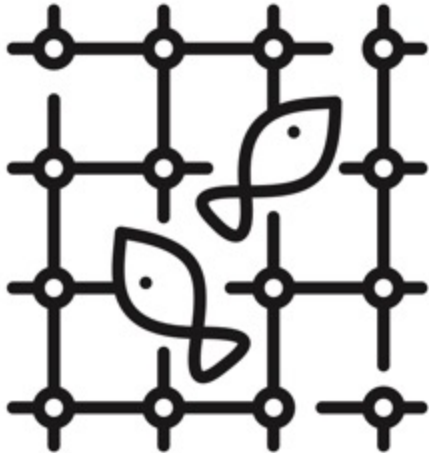
Supply regranulate made from used ropes and nets to the plastic packaging industry.

OCEANS APPLICATIONS

The background is a vibrant underwater scene of a coral reef. In the foreground, there is a dense, textured coral structure in shades of brown and purple. Above the coral, the water is a deep blue, filled with numerous small, colorful fish, including many orange ones and some with black and white stripes. A faint, light blue circular graphic with a central dot and a curved line is overlaid on the left side of the image.

HEALIX® XHD-FN

HDPE Regranulate Made From Fishing Nets



HEALIX® XHD-FN

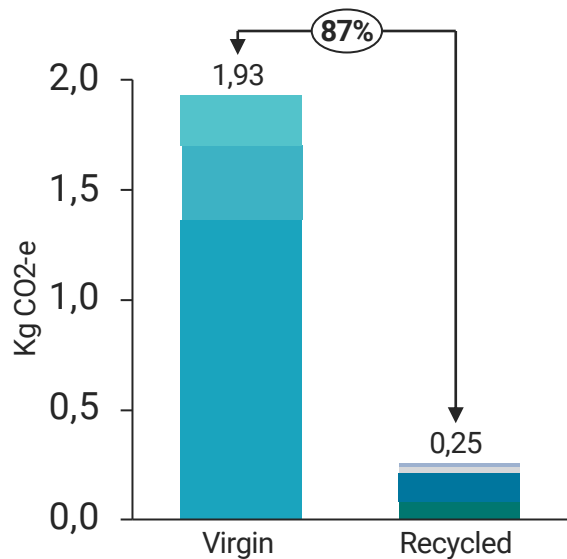
Open-Loop Applications – From Fishing Net To Beer Crate



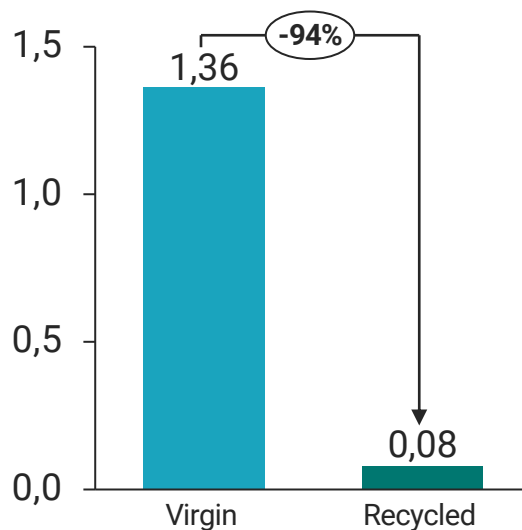
LCA HEALIX® XHD-FN



Cradle to gate



Gate to gate



- Emissions are per kg of material
- 100% Dutch windmill power is used for recycling
- For recycling, material is assumed to be transported a distance of 2 000 km with a 9-LH truck
- Data set: Production run **B070**, received May 6th, 2024

■ Crude oil production ■ Refining ■ Polymer production ■ Collection ■ Sorting ■ Transport to recyclers ■ Mechanical recycling

HEALIX® XPP-MR

PP Regranulate Made From Maritime Ropes



HEALIX® XPP-MR

Open-Loop Applications – From Maritime rope to Mc Donalds Tray



HEALIX® XPP-BB

PP Regranulate Made From Aquaculture Big Bags



HEALIX® XPP-BB

Closed-Loop Application – From Big-Bag To Big-Bag

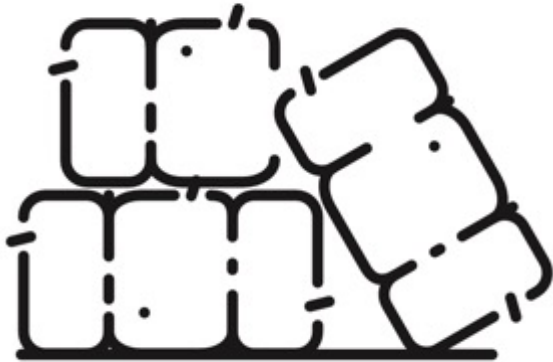


FARMLANDS APPLICATIONS



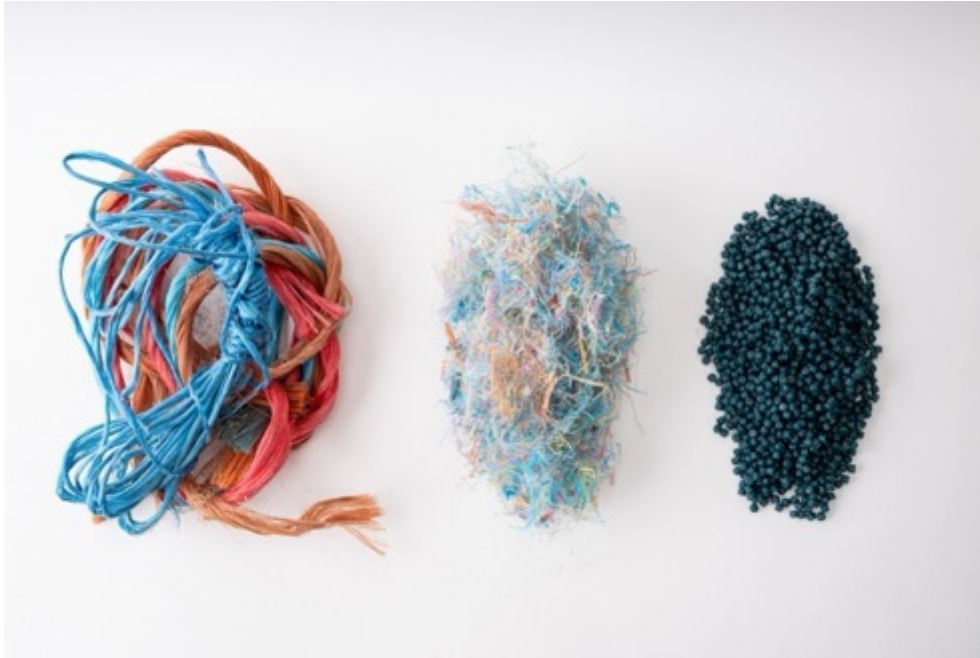
HEALIX® XPP-BT

PP Homo-Polymer Regranulate Made From Agricultural Baler Twine



HEALIX® XPP-BT

Closed-Loop Application – From Twine To Twine



HEALIX® XHD-TN

PP Homo-Polymer Regranulate Made From Dutch Tulip Nets



HEALIX® XHD-TN

Open Loop Applications – From Tulip Net To Iconic Red Coca-Cola Crate





TOLLING SERVICES

THE OCEAN
CLEANUP

HEALIX® CPP-MR

Open-Loop Applications – From Maritime Rope to Car Accessories



VALUE PROPOSITION

What's in it for the customer

REDUCE fossil resources

BE READY for future governmental policy (taxes, incentives) on the use of post-consumer plastics into applications

HELP SOLVE the plastic problem

SAVE >75% CO2 emissions

CREATE a positive company image

Post-consumer waste = recycling
Post-industrial = good manufacturing

RecyClass

RECYCLING PROCESS CERTIFICATE

Healix B.V.

Address: Fregatweg 51 - 6222 NZ Maastricht
Country: Netherlands

Registration office address: Fregatweg 51 - 6222 NZ Maastricht
Country: Netherlands

The audited recycling process and associated management systems have met the requirements of Recycling Process Audit Scheme Version 1.1, in line with EN 15343:2007 and has the required procedures in place in order to ensure the traceability of recycled plastics produced listed in the annex of this certificate.

Certification compliant with EN 15343:2007.

Certification module: General (level 1)

Type of audit: Initial audit

Initial audit date: 15/02/2025

Chain of Custody model: Segregation

Traceability level: Level 1

Process overview: Shredding, Washing, Drying, Extrusion

Input Plastic waste: PE-LD, PE-HD, PP - Bales, Bulk

Type and source of waste: film, rope, net, bigbag - Commercial

Recycled Output: PE-LD, PE-HD, PP - Pellets

Pre-processed waste outputs: -

Audit Report and Certificate Code:

RPS13-HLB-02-26-KIW-FV

Date of the on-site audit:

17/12/2024

Date of issue of Certificate:

15/02/2025

Period of validity*:

15/02/2025 - 14/02/2026

*Validity conditions and terms of use may be found in the Audit Scheme documents.

CERTIFIED BY 

Mr. Bert Van Erkel
Legal Representative

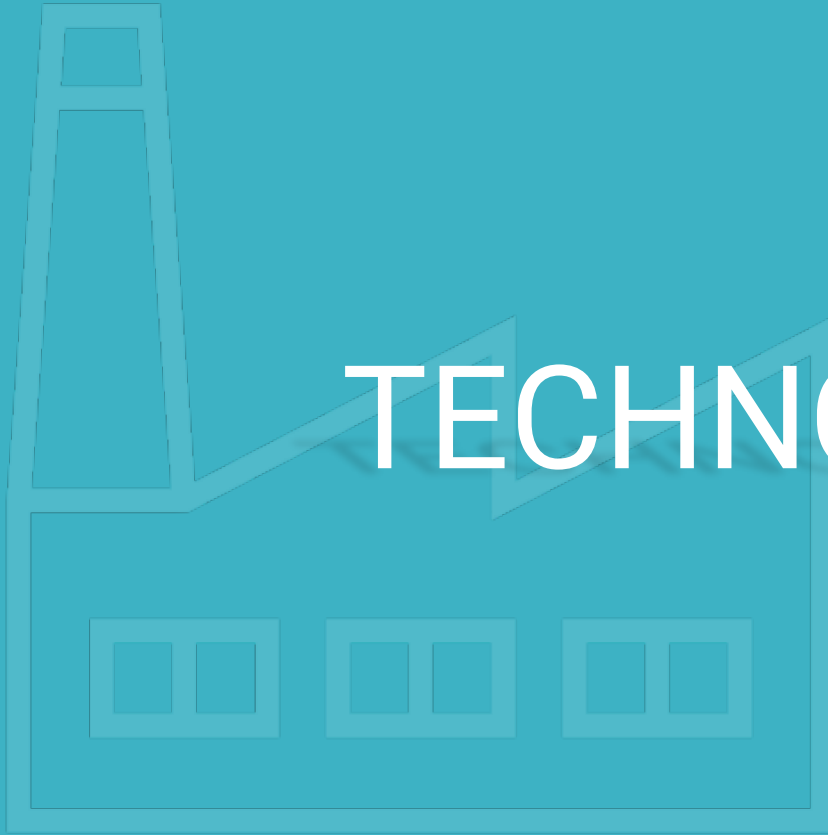
Kiwa Nederland B.V.
Sir Winston Churchillaan 273
2280 AB - Rijswijk
The Netherlands

kiwa



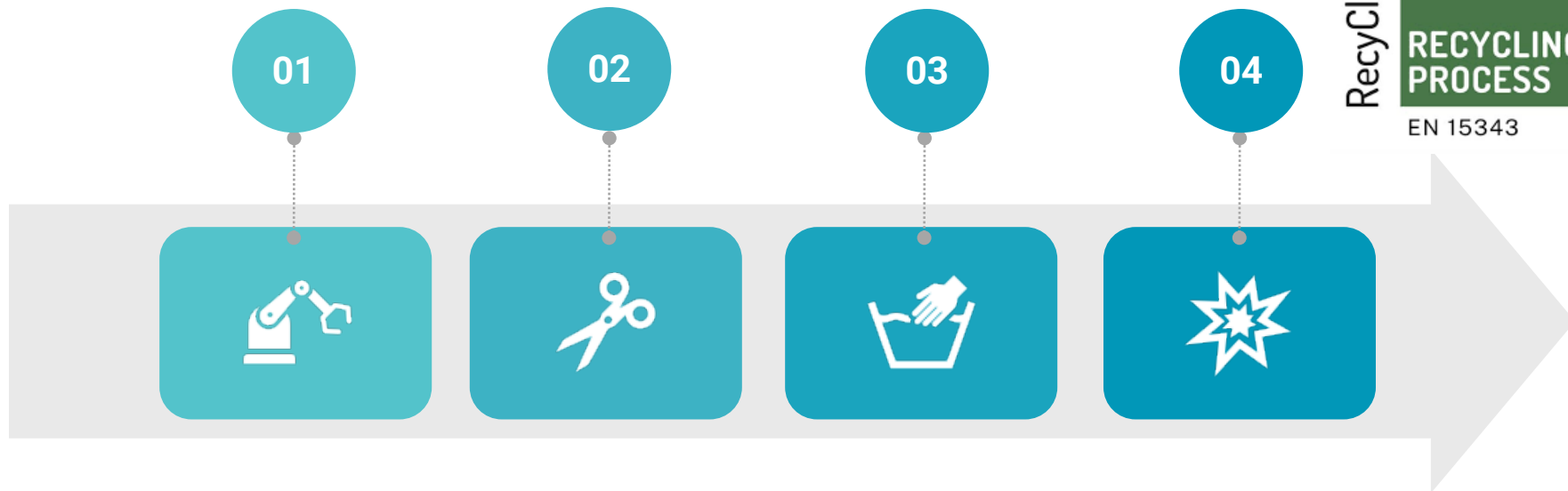


TECHNOLOGY



HEALIX PROCESS

6.000 tons recycling capacity for PP and HDPE plastic fiber waste



Collection

In partnership with e.g.
Adivalor, RIGK and
The Ocean Cleanup

Chopping

Shredder modified for
heavily contaminated
ropes and nets

Cleaning

Patented washing
technology for highly
purified polymers

Compounding

Extruder with double
filtration for even
cleaner polymers

CHOPPING



CLEANING



COMPOUNDING





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WE DO NOT INHERIT
THE EARTH FROM
OUR ANCESTORS
**WE BORROW IT
FROM OUR CHILDREN.**



 healix®