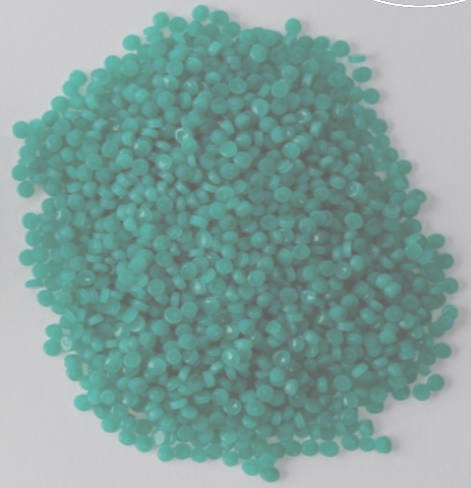
CERTIFIED CIRCULAR POLYMERS

RESCUE
RETRIEVE
RECYCLE
RETURN



FROM DISCARDED ROPES AND NETS

healix

AT HEALIX WE...

...**RESCUE** our planet from plastic pollution by returning it to the economy.

...**RETRIEVE** plastic waste from traceable sources mainly from the fishing and farming industry.

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

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

By keeping plastic **in** the economy, we keep it **out** of the environment.

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

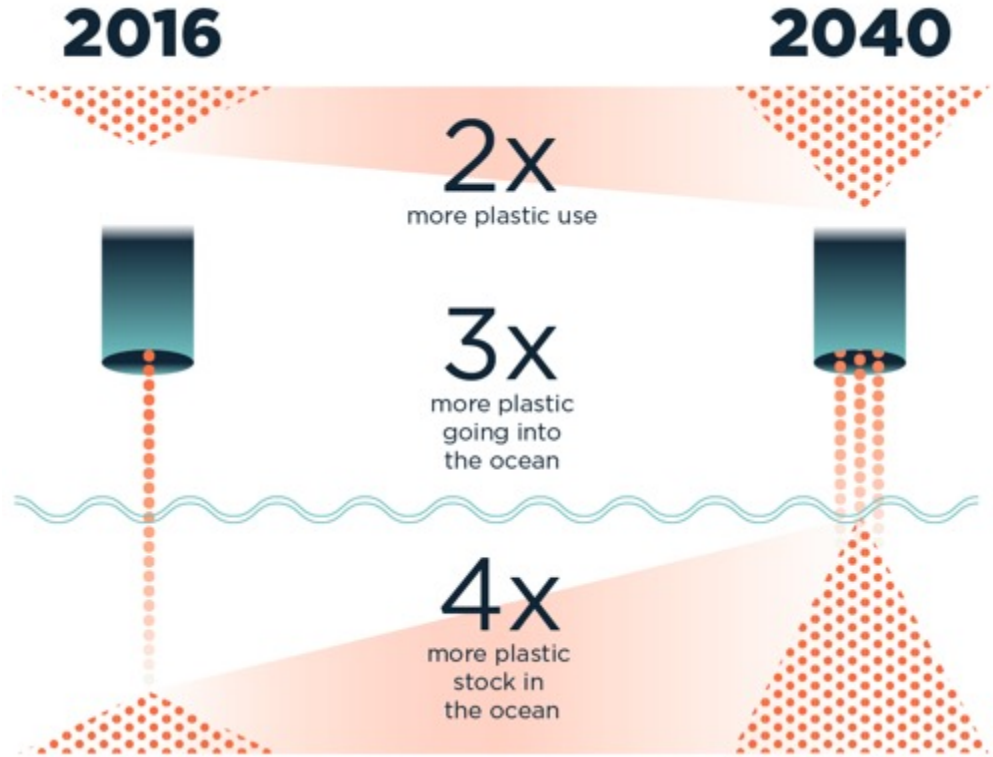
There is even more plastic in agricultural land than in the oceans. Yearly over 12 million tons of plastic products are used in Europe.

BREAKING THE PLASTIC WAVE

Failure to act now will see ocean plastic stocks quadruple by 2040

This study from July 2020 shows that, if we fail to act, by 2040:

- The volume of plastic on the market will double
- The annual volume of plastic entering the ocean will almost triple, from 11mln tons in 2016 to 29 mln tons in 2040
- Ocean plastic stocks will quadruple, reaching over 600 mln tons

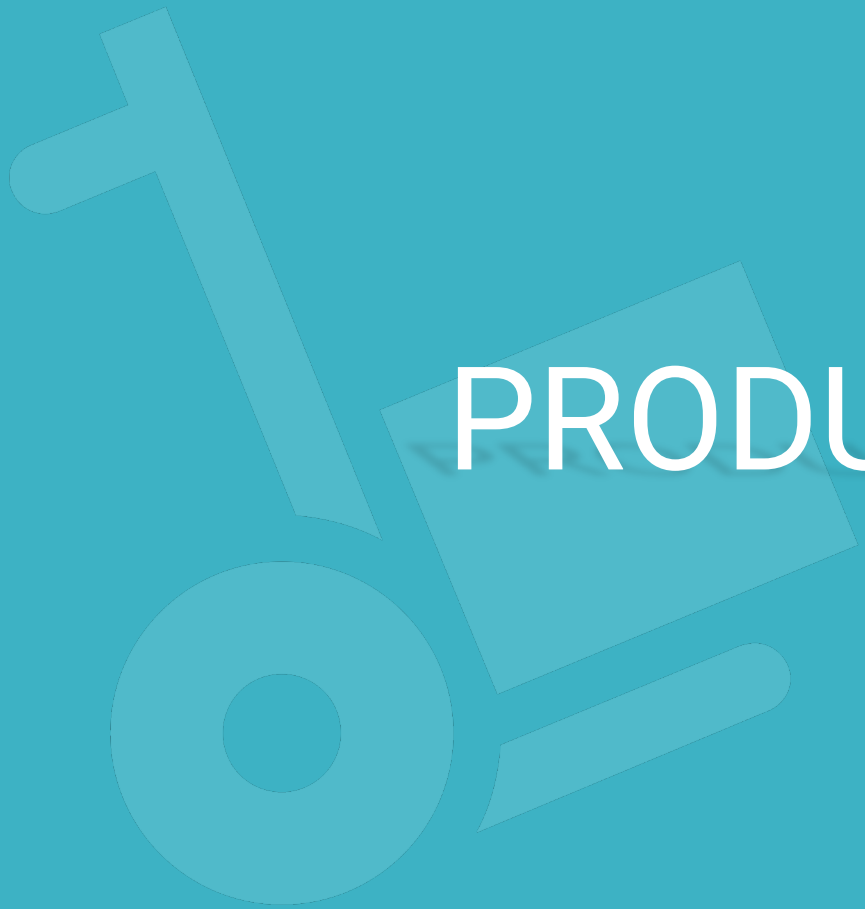


https://plastics.ellenmacarthurfoundation.org/breaking-the-plastic-wave-perspective

SOLUTION

We transform old ropes, nets into pristine circular polymers using our patented purification technology.

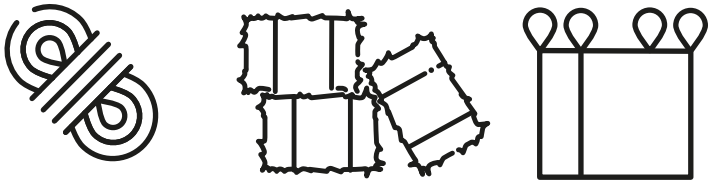
By keeping plastic in the economy, we keep it out of the environment.



PRODUCT

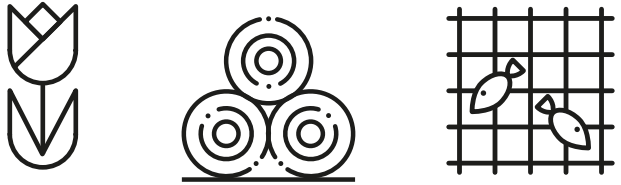
RECYCLED MATERIALS

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

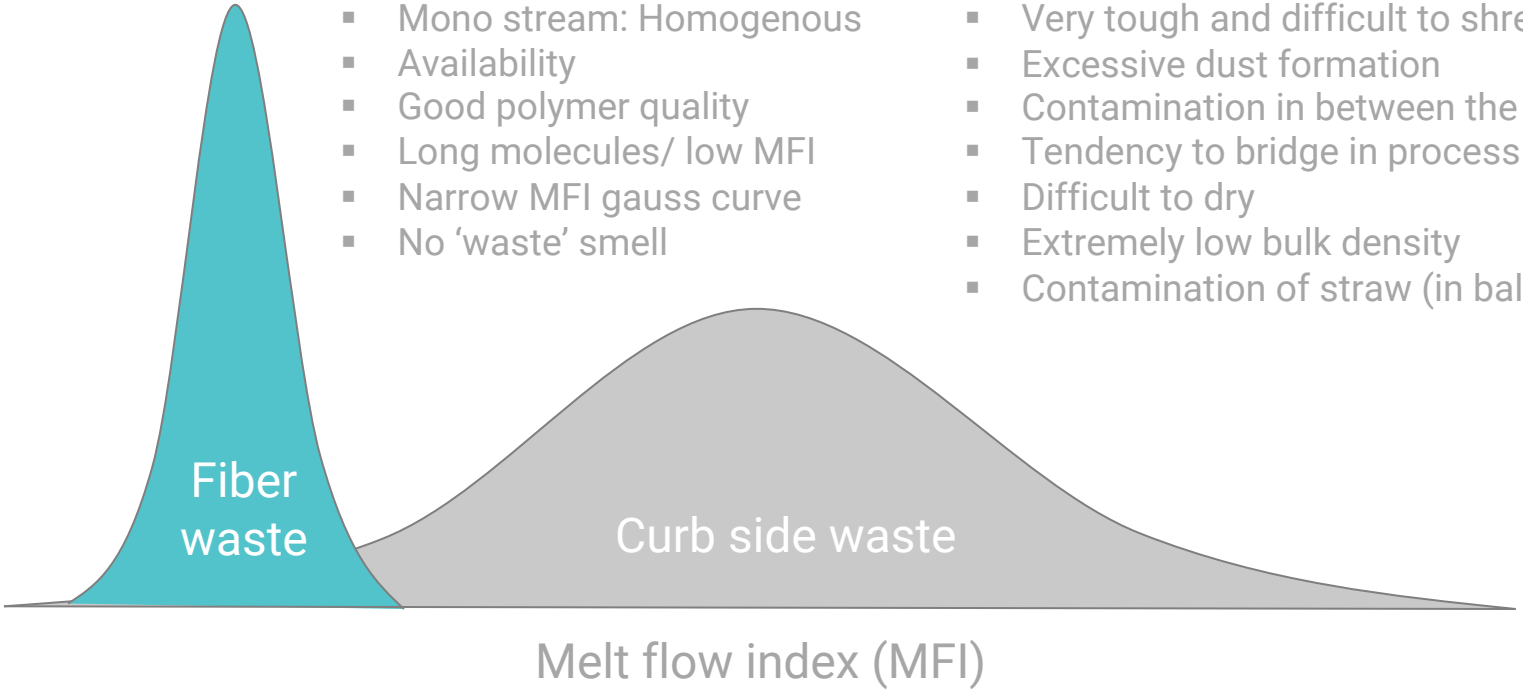
Post-consumer plastic fiber waste is a highly attractive but extremely difficult feedstock

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.

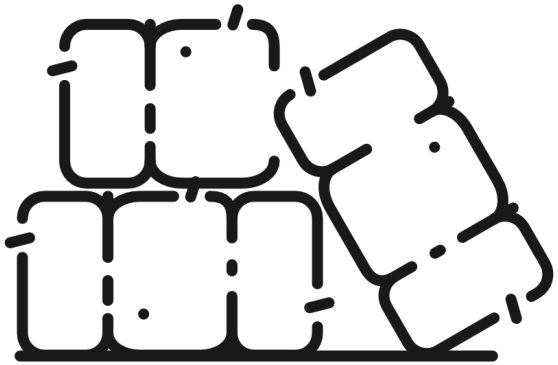
Open Loop

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

EXAMPLES

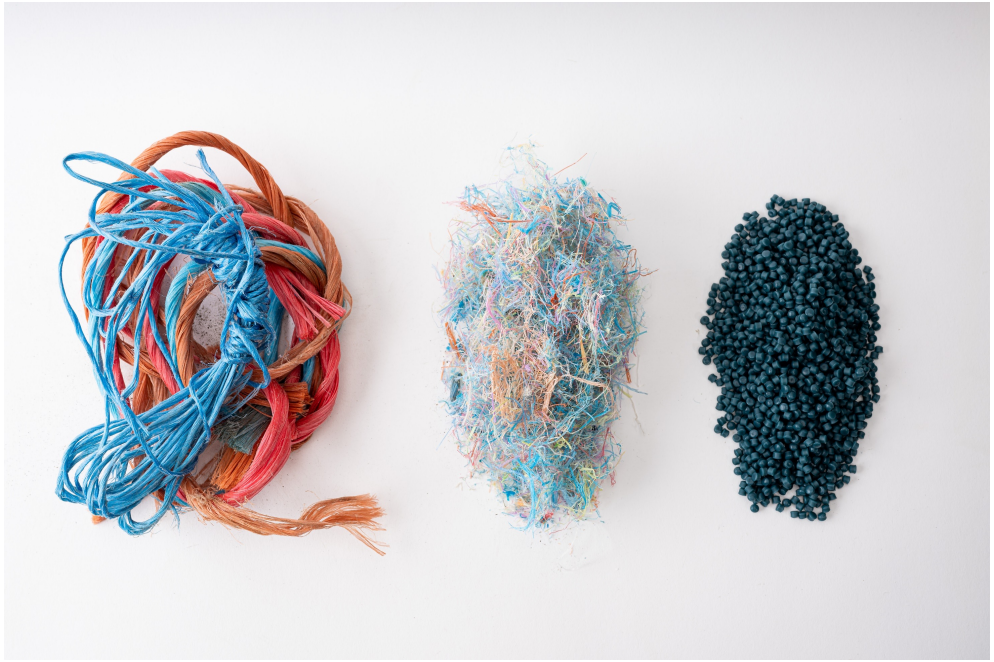
CLOSED-LOOP APPLICATIONS

Healix® XPP-BT



Healix® XPP-BT

CLOSED-LOOP APPLICATIONS – from twine to twine



Healix® XPP-BT

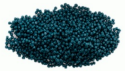
Almost climate neutral

AION

CO2 reduction statement for Healix

Thank you for being a part of the circular economy!
Your contribution matters.

From post consumer baler twine to circular PP regranulate



Total amount produced during run B066:

300 635 kg

This means your use of circular plastic products has the potential to reduce both virgin plastic use **and** plastic waste by the same amount.

Material composition:

99.8% Agricultural twine

0.2% Additive

CO_2e reduction:

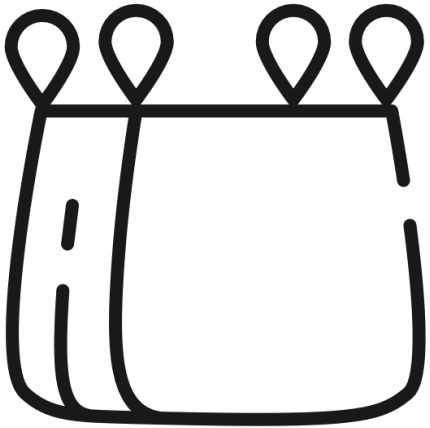
565 880 kg

These are estimates that are calculated using the European Energy Agency's factors for reduced CO_2-footprint: https://www.eionet.europa.eu/etcs/etc-wmge/products/etc-wmge-reports/greenhouse-gas-emissions-and-natural-capital-implications-of-plastics-including-biobased-plastics.

99%

CO_2e saved compared to virgin

Healix® XPB-BB



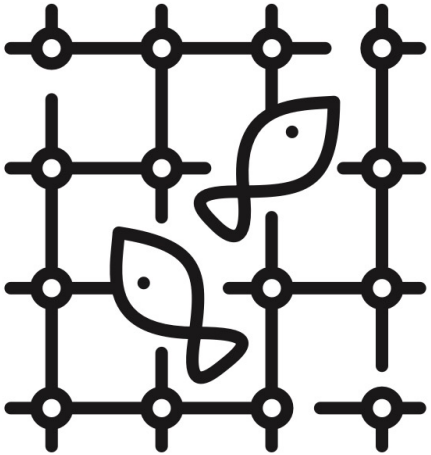
Healix® XPP-BB

CLOSED-LOOP APPLICATIONS – from bigbag to bigbag

EXAMPLES

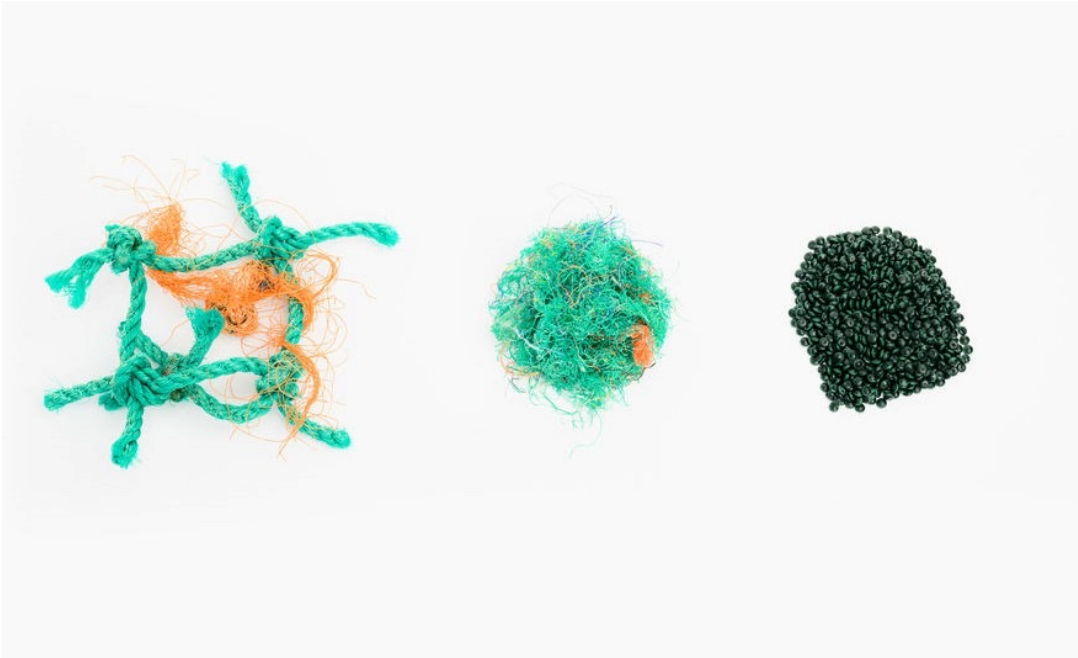
OPEN-LOOP APPLICATIONS

Healix® XHD-FN

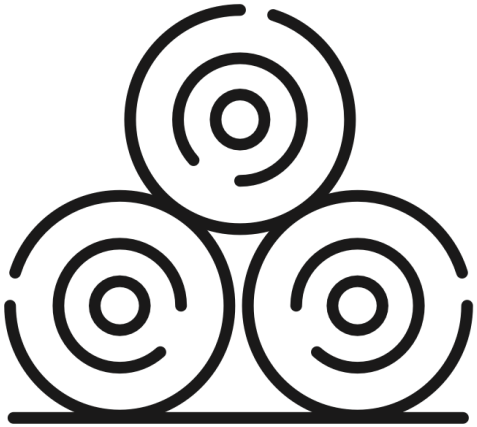


Healix® XHD-FN

OPEN-LOOP APPLICATIONS – from fishnet to beer crate



Healix® XHD-NW



Healix® XHD-NW

OPEN-LOOP APPLICATIONS – under development

Healix® XHD-TN

Healix® XHD-TN

OPEN-LOOP APPLICATIONS – from tulip net to pipe

VALUE PROPOSITION

What's in it for the customer

REDUCE fossil resources

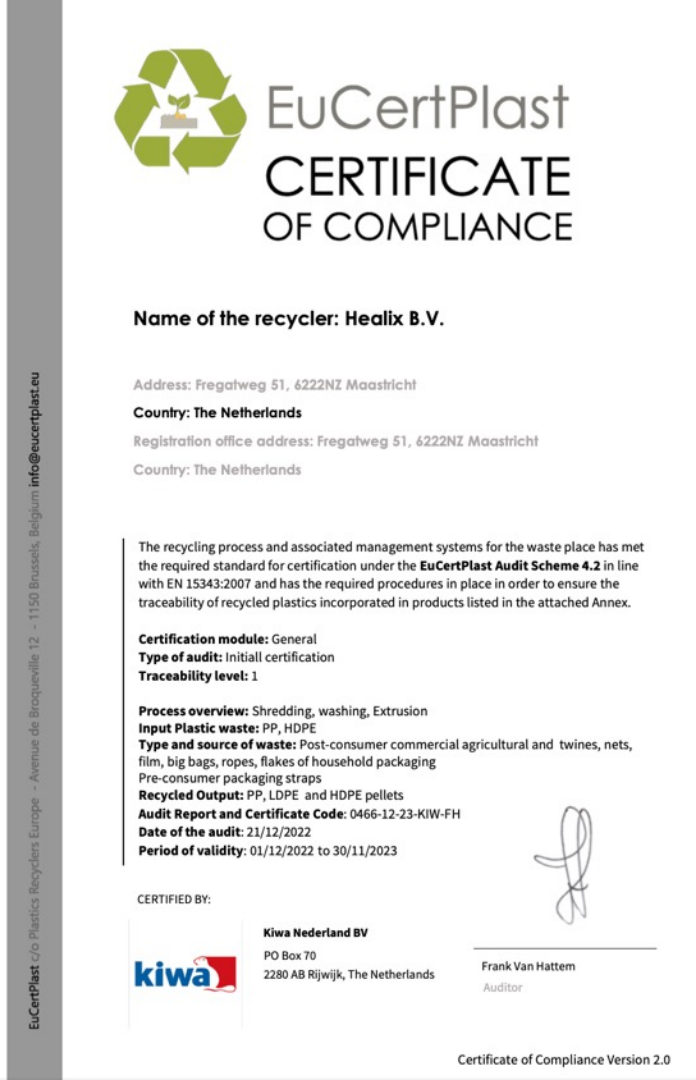
BE READY for future governmental policy (taxes, incentives) on the use of post-consumer plastics into applications

HELP SOLVE the plastic problem

SAVE >75% CO2 emissions

CREATE a positive company image

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



EuCertPlast

CERTIFICATE OF COMPLIANCE

Name of the recycler: Healix B.V.

Address: Fregatweg 51, 6222NZ Maastricht
Country: The Netherlands
Registration office address: Fregatweg 51, 6222NZ Maastricht
Country: The Netherlands

The recycling process and associated management systems for the waste place has met the required standard for certification under the **EuCertPlast Audit Scheme 4.2** in line with EN 15343:2007 and has the required procedures in place in order to ensure the traceability of recycled plastics incorporated in products listed in the attached Annex.

Certification module: General
Type of audit: Initiall certification
Traceability level: 1

Process overview: Shredding, washing, Extrusion
Input Plastic waste: PP, HDPE
Type and source of waste: Post-consumer commercial agricultural and twines, nets, film, big bags, ropes, flakes of household packaging
Pre-consumer packaging straps
Recycled Output: PP, LDPE and HDPE pellets
Audit Report and Certificate Code: 0466-12-23-KIW-FH
Date of the audit: 21/12/2022
Period of validity: 01/12/2022 to 30/11/2023

CERTIFIED BY:

kiwa

Kiwa Nederland BV
PO Box 70
2280 AB Rijwijk, The Netherlands

Frank Van Hattem
Auditor

Certificate of Compliance Version 2.0

EuCertPlast c/o Plastics Recyclers Europe - Avenue de Broqueville 12 - 1150 Brussels, Belgium info@eucertplast.eu

HEALIX IS **PROUD PARTNER OF**

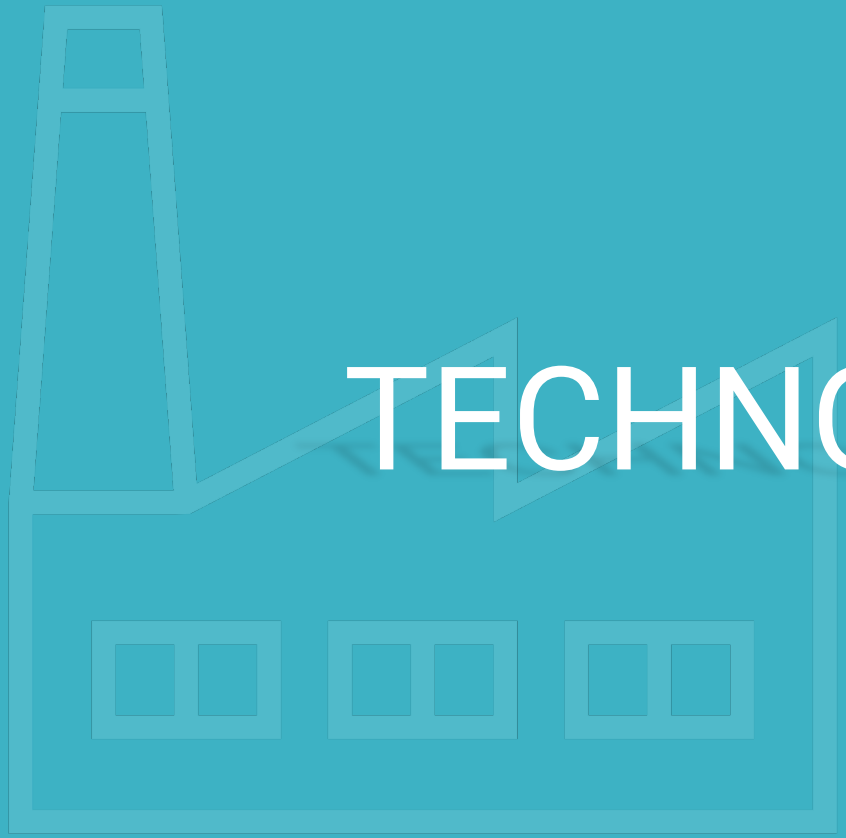
beologic	AION	epsotech	lc packaging	THE OCEAN CLEANUP	Tama	Schoeller Allibert
Step into a greener world with our carbon neutral compounds	Your partner for the **recycled plastic revolution**	**Customized plastic sheets** with minimum 30% PCR inside	**Circular FIBC Solutions**	We develop & scale technologies **to rid the oceans of plastic.**	**Baling for** a better tomorrow	**Efficient by Design** co **Circular by Nature**
beologic.com	**aion.eco**	**epsotech.com**	**lcpackaging.com**	**theoceancleanup.com**	**tama.co.il**	**schoellerallibert.com**





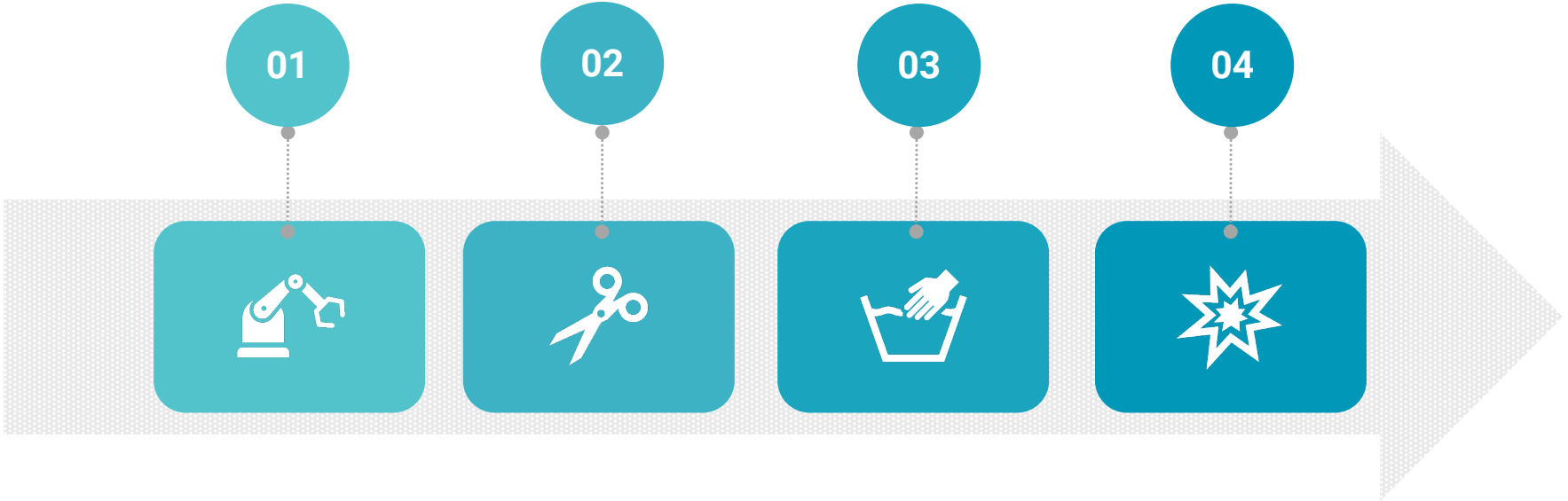


TECHNOLOGY



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

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

Marcel Alberts
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marcel.alberts@healix.eco

healix