



100% Recyclable Polypropylene

STC's Current Core Recyclable Stock Materials

POLYPROPYLENE (PP)

90% Polymer

10% Mineral additives

100% Recyclable

- Hanging Tags
- Handles



HMPP

85% Polymer

15% Mineral additives

100% Recyclable

- Stick-in Labels
- Cellpacks





STC's Core 100% Recyclable Plastics

- STC's core plastic printed products are produced on polypropylene which is fully recyclable via household and industrial waste streams.
- For many years now, STC has been produced using Polypropylene, which is identified by the number 5 in the resin identification code. It is 100% recyclable.
- All STC's polypropylene production waste is recycled.





- The Waste and Resources Action Programme (WRAP) advises that “Polypropylene is one of the most versatile and widely recycled polymers used today and is collected both from commercial and industrial waste streams and households via curbside collection. Once recycled, it has the widest range of secondary markets across multiple sectors including a very large market within the Horticultural Growing sector.”



Retailers are Supporting Recycled



TESCO are not banning all plastic packaging, but they will be excluding all non recycled and hard-to- recycle packaging from stores, including polystyrene and recycled polystyrene.

Which packaging materials will be banned by Tesco?

HARD-TO-RECYCLE PRODUCTS TESCO WILL BAN INCLUDE:	MATERIALS TESCO WILL SUPPORT INCLUDE:	POTENTIAL 'CLOSED LOOP'^{**} MATERIALS/OR TO BE POSSIBLY REMOVED FROM BUSINESS
<ul style="list-style-type: none"> • PVC • Polystyrene • Oxy degradable materials • PLA (Polylactic acid) • Water soluble bio plastics (such as Plantic) • Industrial compostable materials 	<ul style="list-style-type: none"> • Sustainably sourced wood, board, paper and glassine • PET (Polyethylene terephthalate) • Glass • Polypropylene (non food) • HDPE & LDPE • Polyethylene (preferred material for flexible film) • Steel and aluminium 	<ul style="list-style-type: none"> • Home compostable (including Cellulose and Natureflex) • Oriented polypropylene • Black plastic • Polypropylene (for certain food applications) • Complex laminates

(* A 'closed-loop' packaging system is where everything that is used is collected and recycled.)



STC's Other Sustainable Packaging Materials

Recycled PP

50% to 70% recycled post-industrial PP.
Subject to availability.

NON- TEAR

Polypropylene with mineral additives - 180mic and 320mic.
Up to 5 times stronger than PP – 100% recyclable.

eco³

NEW alternative to conventional PE coated boards.
100% recyclable | 100% compostable | 100% biodegradable



FSC accredited cartons for packaging.
FSC accredited papers for brochures and catalogues.



Biodegradable and Compostable Plastics

- Biodegradable and compostable plastics are also available on request from STC.
- However, care is advised when selecting new materials as such substrates can, according to WRAP, “pose an existential threat to end markets for recycled plastics if they begin to flow into the mechanical recycling supply chain”.
- We also recommend that consideration be given to the full life cycle analysis and recyclability of all materials. In particular material creation and transport costs and sources of alternative uncertified boards and laminates.



STC's Future Pipeline Plastics

STC's further development of plastic continues with our supply chain, taking into account the main objectives of the 2018 UK Plastics Pact, namely:

- **Eliminate** problematic or unnecessary single-use plastic packaging through redesign, innovation or alternative (reuse) delivery models.
- **100%** of plastic packaging to be reusable, recyclable or compostable.
- **70%** of plastic packaging effectively recycled or composted.
- **30%** average recycled content across all plastic packaging.

STC's Future Pipeline Plastics

PLANT BASED POLYMERS

- HDPE - Renewable, certified, recyclable, NOT biodegradable.
- Price is currently +75% more than PP whilst under development.
- This material will eventually replace oil-based polymers.



- Needs improved ink cleaning technology.
- Recycling infrastructure needs strengthening.
- Currently unobtainable but being monitored for viability.

Oxo (bio) degradables

- Controversy over breakdown – concerns amongst science that micro-fragmentation is left behind that can affect marine life.
- Poses an existential threat to end markets for recycled plastics*.

Cost Comparison of PP v alternatives

	Price-level	NOTES
PP	Benchmark	100% recyclable
HMPP	similar	100% recyclable
HIP	similar	Difficult to recycle
STC Non-Tear PP	similar	25% thinner, 100% recyclable
Recycled PP	similar	Between 50% and 75% recycled. Limited availability
HDPE	+70%	Long supply chain
Oxo-biodegradable	+25%	WRAP advise avoidance
Bio-polymers	+100%	Difficult to recycle



Talk to Us

- The continued development of sustainable substrates is very important to STC and we would like to work closely with you as we work with our supply chain.
- STC tracks differences and changes in policy and legislation in the UK and Europe through discussions with Universities, Trade bodies and supply chains.
- STC continues to offer recyclable and recycled polypropylene products that fit into the same established waste streams.
- STC can advise when selecting materials. We can also mark products on request so that the messaging is clear for consumers.