



rFlex® Recycled Plastics

Advanced Plastics, Engineered from Waste

rFlex® is our proprietary recycled plastic resin made from mixed post-consumer soft plastics and recovered materials, helping businesses reduce their environmental footprint while creating durable, high-quality products.

SPEAK WITH OUR INNOVATION TEAM 



rFlex®

Recycled Plastic Resin: Sustainable Manufacturing Solution

rFlex® is a recycled plastic material developed by Close the Loop (CtL) and can be supplied to manufacturers of plastic items, including pallets, crates, trolleys, baskets, and tubs. Any plastic products that are injection, rotational or extrusion moulded can utilise rFlex®.

Close the Loop works to tailor rFlex® to meet specific manufacturer requirements, ensuring equal performance with the virgin plastic it replaces.

Close the Loop manufactures rFlex® as a part of their Zero Waste to Landfill Brand Promise—none of the conforming items that Close the Loop accepts through any of their collection programs (including cartridge recycling, cosmetics recycling, and soft plastics recycling) is sent to landfill.



Key Features of rFlex®

100% recycled content, primarily post-consumer materials

Diverts complex waste streams from landfill

**High durability, impact resistance, and
UV/weather stability**

**Designed for consistent color and
strength performance across production
batches**

**Designed for low-maintenance and high-
performance applications**

**Made in Australia from Australian post-
consumer and post-industrial waste**

**Suitable for multiple moulding
processes**

What It's Made From

rFlex® is made from predominantly soft plastic packaging, sourced from a mix of post-consumer and pre-consumer soft plastics. Packaging films, pouches, bags, shrink wrap, and even bubble wrap can be used to make rFlex®, which is supplied to end users in pellet form in bags of 700kg or 1000kg. rFlex® is formulated from a blend of:

- Soft plastic packaging
- Post-consumer and post-industrial plastic streams

This mix enables rFlex® to replace virgin plastics in demanding real-world applications, building strength and consistency from materials that would otherwise go to landfill.



Post-consumer and post-industrial plastic streams



Soft plastic packaging



“The only way we’ll build resilient supply chains is for everyone from consumers, brands, transport, manufacturers and industry to put aside our bias toward recycled plastics and understand that if we want to reach global greenhouse emissions targets or National Waste Policy targets, we need to replace virgin plastic with recycled plastic as a priority.”

Steve Morriss, Head of Circularity at Close the Loop

Applications

rFlex® is already being used to manufacture:

Shipping
totes and

Infrastructure
and road-
safety
products
(e.g., wheel
stops,
barriers)

Coles
“Supercart”
trolleys (20 %
rFlex®
content)

Emerging
applications
in street
furniture and
architectural
panels

Rigid plastic
components
for
construction
and
industrial us

SEE CASE STUDIES →

The Circular Advantage

Every product made with rFlex®:



Diverts materials from
landfill



Reduces reliance on
virgin plastics



Creates a local, circular
supply chain



Supports ESG, EPR, and
Net Zero targets

rFlex® contributes to Australia's National Packaging Targets and provides brands with a tangible way to demonstrate circular design in practice

DISCOVER THE CIRCULAR CONTRACT



Industries We Support



Construction
and civil
infrastructure



Transport and
logistics



Sustainability
& circular-
economy
projects



Local
governments
and councils



Emerging
applications in
outdoor and
street furniture
manufacturing

What Makes rFlex® a Game Changer?

rFlex® is more than just recycled plastic, it's a breakthrough in transforming hard-to-recycle waste into high-performance, versatile materials.



Transformation of Challenging Soft Plastics

rFlex® is made from soft plastics that typically lack end-of-life solutions, including mixed post-consumer and post-industrial films, bags, shrink wrap, and other flexible materials. These plastics are often contaminated with:

- Organic residue
- Inks and adhesives
- Multi-layer compositions

rFlex® gives these “unwanted” materials a second life, diverting them from landfill and turning them into valuable, usable plastic resin.

Innovative Recycling Process

Close the Loop® has developed and perfected a proprietary recycling process that:

- Handles mixed and contaminated plastic waste streams
- Produces a consistent, high-quality resin
- Keeps materials in circulation for longer, a key principle of the circular economy



Versatile Applications in Manufacturing

Each rFlex® batch can be custom-formulated during production to match a manufacturer's needs, offering:

- High durability and resistance to weather
- Compatibility with multiple moulding techniques (injection, extrusion, compression)
- Reliable performance across a wide range of industries

Advancing Circular Economy Practices

By using rFlex®, manufacturers:

- Reduce the demand for virgin plastics
- Lower their carbon footprint
- Support ESG, EPR, and Net Zero initiatives
- Actively contribute to closing the loop on complex plastic waste

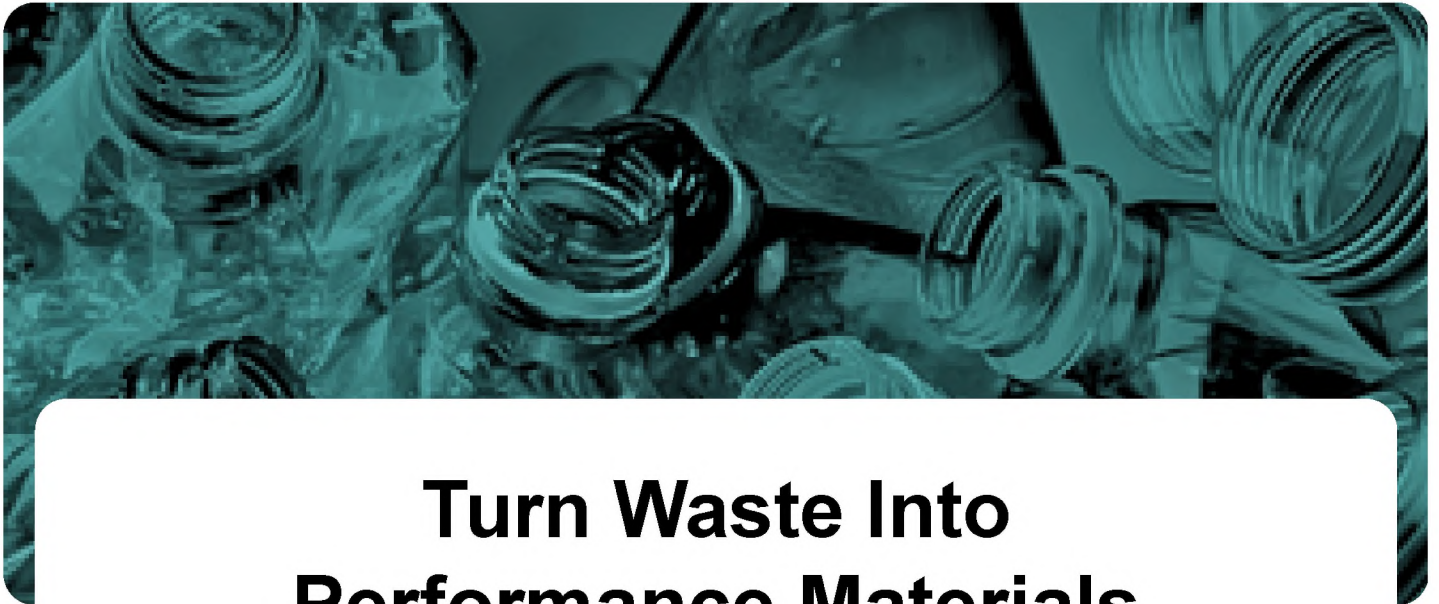


[LEARN ABOUT OUR CIRCULAR CONTRACT](#)



rFlex® In Action: Coles Supercart Shopping Trolley

Close the Loop® collaborated with Coles and ISP in Melbourne to create a fleet of Supercart shopping trolleys using 20% rFlex®. These trolleys are featured in a number of Coles stores as part of their Together to Zero sustainability initiative.



Turn Waste Into Performance Materials

Join businesses using rFlex® to create better products with lower impact.

REQUEST A SAMPLE →

DISCUSS YOUR APPLICATION →



Want to Explore More Circular Products?

From e-waste to print cartridges and soft plastics, see how Close the Loop® helps recover materials across every industry.

EXPLORE ALL CIRCULAR SOLUTIONS →

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Frequently Asked Questions

What is rFlex®?



What is rFlex® made from?



Does rFlex® align with the circular economy?



rFlex® significantly contributes to the circular economy by embodying its core principles:

1. **Reducing Waste:** rFlex® transforms mixed soft plastic waste into a valuable resource. By repurposing these plastics, which

are mostly post-consumer, rFlex® plays a crucial role in diverting waste from landfills.

2. **Extending Material Lifecycle:** We design rFlex® to keep materials in circulation for longer. rFlex® uses recycled materials and is recyclable itself, thus extending the lifespan of the original materials.
3. **Regenerating Natural Systems:** By diverting plastics from litter, rFlex® helps mitigate the adverse impacts of plastic pollution on natural ecosystems while reducing overall carbon footprint of the product using rFlex® in place of virgin plastic.
4. **Product Design for Sustainability:** rFlex® is designed with whole-of-life considerations. The material is formulated to ensure that it can be efficiently recycled at eventual end of product life, while minimising the use of virgin materials for products at start of life.
5. **Promoting Sustainable Consumption:** By offering a high-quality, recycled alternative to virgin plastics, rFlex® encourages manufacturers and consumers alike to make more environmentally responsible choices.

Does using rFlex® make plastic products worse quality?

No. rFlex® is designed to meet existing application specifications, including adjustments to impact strength, flexural modulus, tensile strength, and melt flow index. It's not one size fits all for rFlex®; we compound the material to your specification to ensure it works as well as virgin materials.

How does rFlex® maintain quality if using recycled materials?

rFlex® is not made to be a one-size-fits most solution, it is instead engineered to meet specific performance criteria for each application to ensure that it meets the performance standards of virgin plastics.

For example:

Shipping Pallets: rFlex® is designed to offer robust impact strength, ensuring durability and resilience under heavy loads.

Shopping Trolleys: We optimize rFlex® for higher melt flow characteristics, facilitating the use in larger moulds without compromising the product's structural integrity.

Through innovative engineering and a commitment to quality, rFlex® challenges the notion that recycled materials are inferior while delivering a more sustainable material solution.

Where do the soft plastics used in rFlex® come from?

Close the Loop® use soft plastics from retail store drop-off programs, from local council soft plastics recycling initiatives, as well as direct from key partners supply chains. With a focus on [circular contracts](#), Close the Loop® aim to take-back and recycle soft plastics from companies that then buy-back recycled content or more sustainable packaging products from us to inform a circular economy.

Can't the plastic used in rFlex® be recycled back into food packaging?



The majority of post-consumer soft plastic packaging used in rFlex® contains too much contamination from organic matter, inks, and adhesives to be made back into food-safe packaging here in Australia. Improvements in technology and packaging materials will increase the capability for packaging-to-packaging recycling of soft plastics in Australia over the coming years, helping balance our supply and demand for recycled content in packaging products.

Is rFlex® suitable for food packaging or other food-grade applications?



No. rFlex® is specifically designed for use in non-food-grade applications. Unlike rigid plastic streams such as clear PET and HDPE, which have large end-market potential, the post-consumer soft plastic materials used to make rFlex® are far more challenging and are not suitable for food-grade recycling due to contamination from organic matter/food, inks, and adhesives.

What types of products can be created using rFlex®?



rFlex® is incredibly versatile and can be used to manufacture a wide range of plastic products typically made from either Polypropylene (PP) or Polyethylene (PE). This includes products that are created by injection or extrusion moulding, including pallets, tubs and crates. For instance, we can formulate rFlex® to function with the same performance and durability as virgin plastics within product crates, while encouraging the use of recycled materials and shift towards a more sustainably-focused supply chain.

How can councils or businesses get involved with soft plastic recycling or using rFlex®?

