

DPET[®] & rDPET[®] SHEET

INCORPORATING
DIRECT-TO-SHEET
TECHNOLOGY



RECYCLED CONTENT PET SHEET: LOWEST CARBON FOOTPRINT WITH THE HIGHEST OPTICAL AND MECHANICAL QUALITY

OCTAL is changing the game with regards to circularity in the packaging industry with its next generation rDPET® incorporating Post Consumer Waste (PCW) and Post Industrial Waste (PIW) content, using its directly integrated depolymerisation technology.

Evolving to meet the growing sustainability demands of consumers and brand owners alike, it allows for the inclusion of PCW and PIW utilizing directly integrated depolymerization unzipping PET waste and rebuilding it as a new polymer into its sheet without compromising performance attributes that are typically degraded in traditional mechanical recycling processes.

This ground-breaking rDPET® product proves that depolymerization works, is commercially available and allows the ability to economically return Post-Consumer and Post-Industrial waste back to its original form of new PET sheet time and time again without degradation of its mechanical or optical properties. Not only does the process allow for the highest of sheet quality but also further enhances its reuse potential with attributes similar to virgin resin if reprocessed again by traditional extrusion means.

BETTER FOR THE ENVIRONMENT:

65%
less manufacturing energy consumption

REAL DOWNGAUGING POTENTIAL
means less raw materials used

SAME CARBON FOOTPRINT
as rPET with 50% PCW content

PALLETLESS SHIPPING

20% lower carbon footprint than any competing virgin material

BETTER FOR MACHINING:

Typically observed thickness variation **<1%**

PRECISE FORMING
provides dependable closure performance

HIGH RIGIDITY
for hang-tab applications

CONSISTENT FORMING
for multi-pack breakaway features

TOTAL TRACEABILITY

HIGHER DEFINITION
even with deep draws

HIGHER RESISTANCE
to cracking

UNMATCHED UNIFORMITY

BETTER THERMOFORMING PRODUCTIVITY:

LOWER CYCLE TIMES

LESS WASTE

FASTER START-UPS
and less blade wear (so increased blade life)

MORE PRECISE FORMING

BETTER FOR PACK OPTICS:

SUPERIOR GLOSS

GREATER CLARITY

UNMATCHED UNIFORMITY

BETTER FOR FORM, FILL AND SEAL APPLICATIONS:

HIGHER PERFORMANCE
as a fully recyclable mono layer structure. Removes the need for a PE layer for sealing to a lidding film

STRONGER

TOTAL TRACEABILITY

HIGHER RESISTANCE
to cracking

EASIER CUTTING
with less blade wear

HIGHER DEFINITION
even with deep draws

PRECISE UNWINDING AND WEB CONTROL

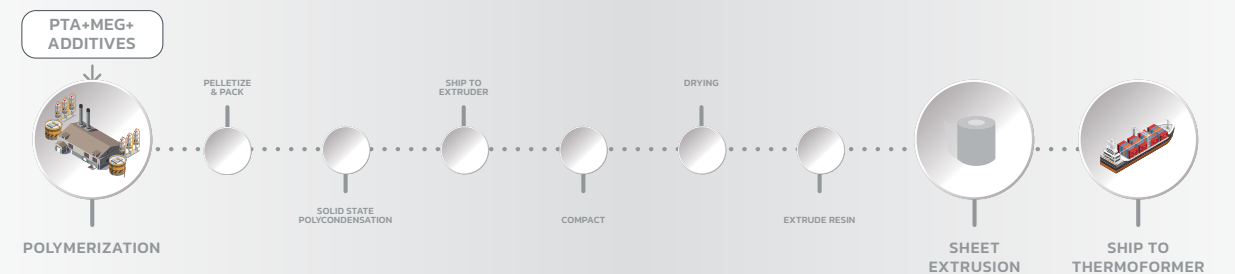
THE DPET® ADVANTAGE

Unique performance and sustainability attributes, with the option of Recycled Content for added benefits of circularity.

OCTAL's patented Direct-to-Sheet manufacturing process produces the first ever PET Sheet directly from PET melt resin. By removing five energy intensive stages from the conventional sheet production process (pelletising, SSP, compacting, drying, and extruding), OCTAL further enhances

its sheet footprint with in-line depolymerisation to meet the growing environmental and sustainability objectives of Retailers, Brand Owners and evolving Governmental Legislation without any compromise to quality or performance.

TRADITIONAL PET SHEET MANUFACTURING PROCESS



OCTAL DIRECT-TO-SHEET (DPET®) MANUFACTURING PROCESS



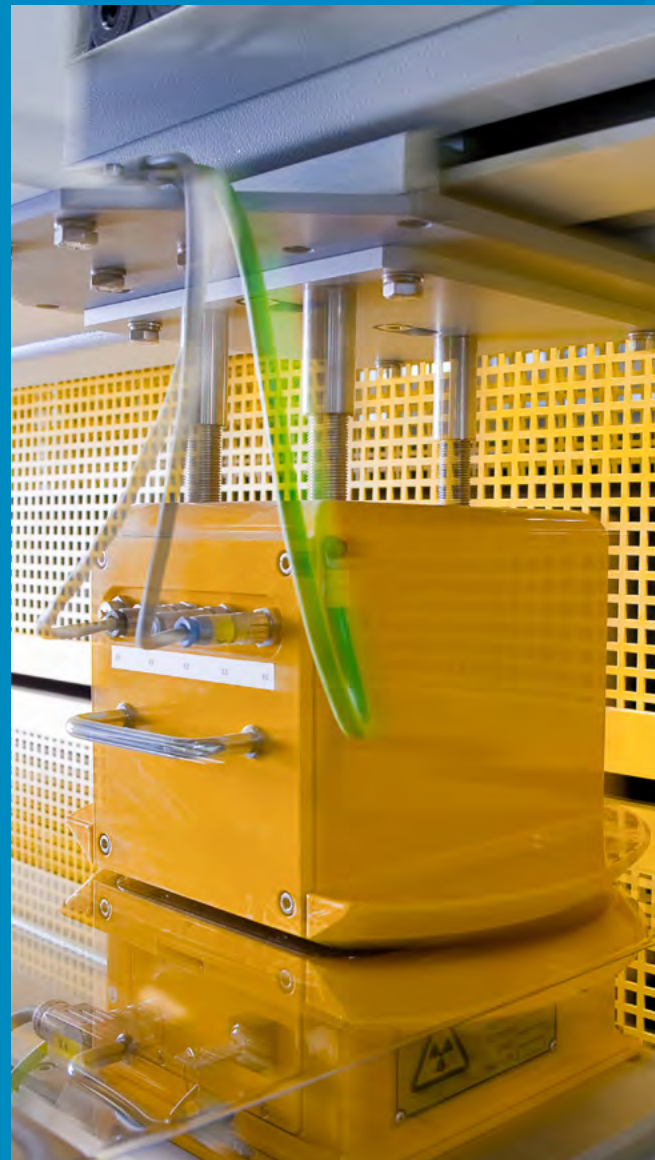
OCTAL RECYCLED DIRECT-TO-SHEET (rDPET®) MANUFACTURING PROCESS



DPET® PRODUCT FEATURES

FOR THERMOFORMERS, RDPET® OFFERS A RECYCLABLE VERSION OF DPET® WITH:

- Identical processing advantages that runs faster and with less wastage than traditionally extruded sheet.
- Unmatched consistency and precise thickness control that delivers improved material distribution in the forming process, allowing for 3% - 8% improved material flow to the most critical areas of the part. This provides the opportunity to reduce gauge typically by 5%-10% while maintaining pack integrity.



FOR DESIGNERS IT MEANS:

- The creative freedom to craft brave customised packaging with startling optics
- The reassurance that DPET® and rDPET® containers can be produced from the lightest possible calliper sheet whilst retaining strength and precise definition.

FOR BRAND AND RETAIL PARTNERS:

- Working with the world's biggest, best-known, and most respected manufacturer means PET sheet packaging options are limited only by design and imagination, whilst delivering true product circularity back to PET's original attributes time after time without compromising quality or performance.

DPET® APPLICATIONS

DPET® and rDPET® sheet is perfect for:

THERMOFORMED PACKAGING

FORM-FILL-SEAL

CLAM-SHELLS

TAMPER EVIDENT

LAMINATION

BOX AND PRINT

FLAT LIDS

BLISTERS

TRAYS

DEEP FREEZE



To package Food and Consumer Applications:

PRODUCE

PROTEIN

BAKERY

MEDICAL DEVICES

DAIRY

PHARMA

CONSUMER PRODUCTS

UNITING LEGACIES OF INNOVATION

Established in 2006, Alpek Polyester's Middle East subsidiary, OCTAL, operates the largest PET (Polyethylene Terephthalate) resin plant of its type in the Middle East and the biggest clear rigid PET sheet plant in the world.

Owned by Alpek Polyester, the world's second largest producer of PET Resin and the largest producer and recycler of PET in the Americas, OCTAL's clear rigid packaging material has been the preferred choice for decades in the industry, leading the way with its virgin DPET® sheet.

From the first monomer production at its Mexico facility almost half a century ago, to the evolution of its fibres and resins products and the emergence of the specialty

polymers that have defined its prominence in recent years, Alpek Polyester has led the world's chemicals and materials industries by predicting and exceeding the evolving needs of its global customer base. As a pioneer of better and more responsible ways of leveraging the unique properties of polyester, along the way it has also become a respected leader in recycling and creating circular economies.

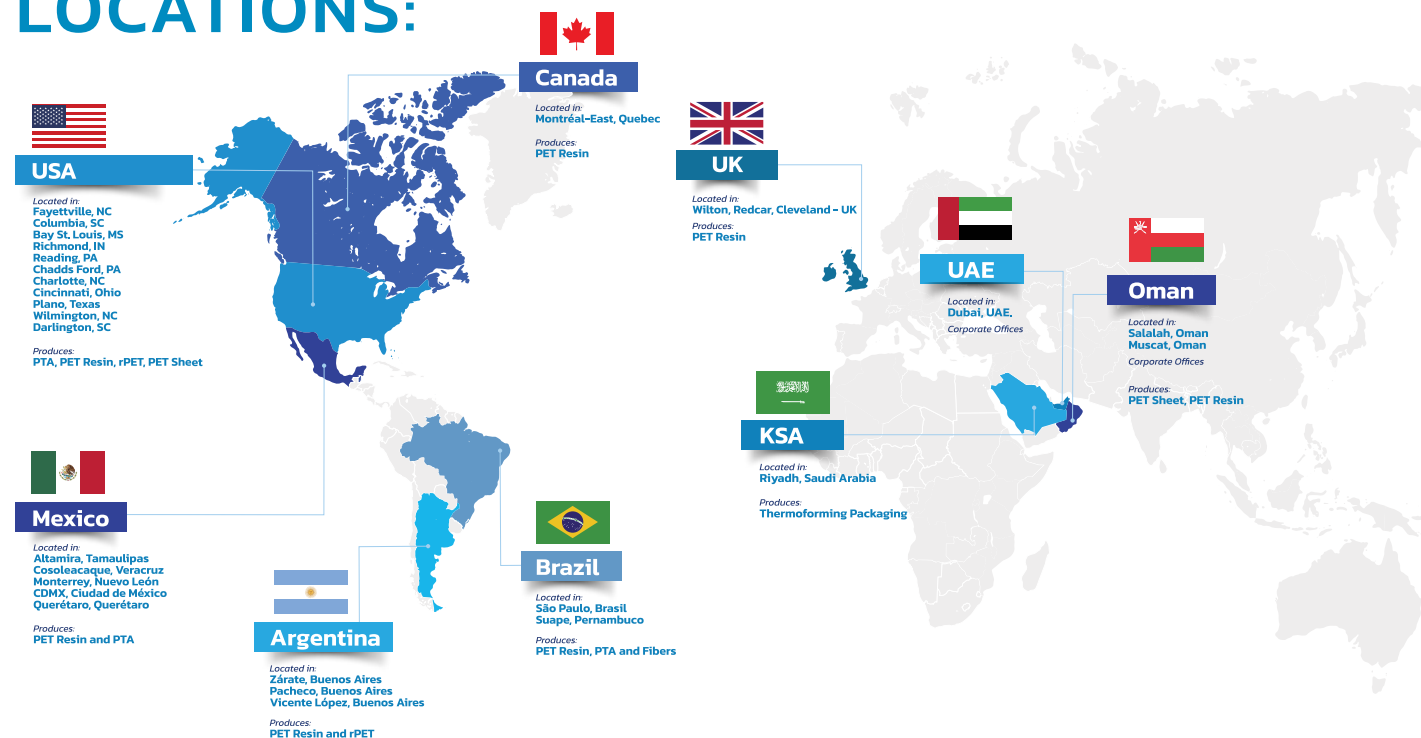
Underpinning Alpek Polyester's rapid growth is the commitment and support of its parent company Alpek; one of the world's largest integrated PTA and PET producers with 7,000 employees in 35 plants across 9 countries.

THE INTEGRATED ALPEK POLYESTER BRAND

Integrated operations create one stronger market-leading organization to maximize value in the global polyester marketplace.

- ✓ Full alignment with customers' needs
- ✓ Enhanced competitiveness and superior trade leadership
- ✓ Market position as the preferred supplier in the polyester marketplace
- ✓ Maximized business value
- ✓ Streamlined decision making
- ✓ Focused operational excellence

OUR LOCATIONS:



WINNING THE RIGHT WAY

At Alpek Polyester, our Purpose is to provide sustainable packaging solutions to improve people's everyday lives.

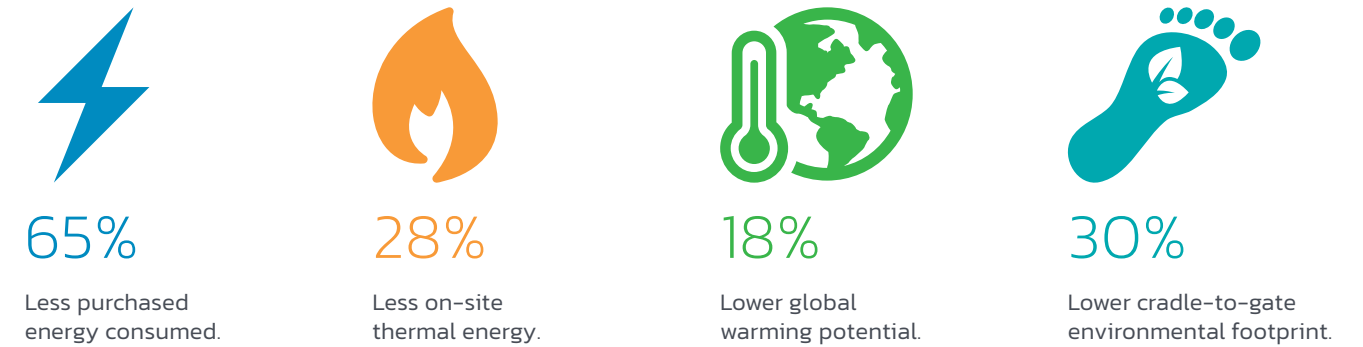
We are also committed to our mission of delivering better and more responsible solutions to the market that will protect the environment and planet.

All of this while delivering on our vision to strengthen our market leadership in the chemicals and materials industries by exceeding the evolving needs of our customers to bring sustainable and innovative solutions in the polyester value chain.

This purpose, mission and vision have already achieved significant milestones, including the development of

pioneering production processes from which its sustainably built plants make products with the industry's lowest energy input and CO₂ emissions per ton of production. This translates into significant value for customers who benefit from using the lightest weight, highest quality PET packaging with the smallest environmental footprint.

Our DPET® sheet also requires nearly two-thirds less purchased grid electricity per kilogram of sheet when compared to traditional APET sheet made from bottle-grade resin.



APET FROM OCTAL DPET®

Our sustainability mission is supported by Alpek Polyester's GreenPET business and state-of-the-art recycling facility at its Cincinnati, Ohio plant in the USA.

This unique facility has strategic agreements with its DPET® customers to buy back trim waste which it then recycles into APET sheet.

Given that the DPET® and rPET™ carbon footprint is already at a world-beating low level, recycling the trim means its second generation APET footprint is 88% lower than PET virgin sheet and 76% lower than sheet made from 50% PCW.

IF **48M KG/YEAR** of rPET sheet was replaced by OCTAL APET sheet, THE CO₂ SAVING WOULD BE **54M KG CO₂/YEAR.**

This is equivalent to the CO₂ absorbed by approximately

2.1 M TREES EACH YEAR.



This is equivalent to the annual CO₂ emitted by approximately

16,700 CARS



PRODUCT OFFERING



Gauge:
150 to 2000 microns



Color:
Clear, Black White or
Bespoke colours on request.



Typical Gauge Variation:
Less than +- 1%
(100% monitored with SPC)



Sheet Width:
Up to 1970 mm



Standard Core ID:
152 mm



Roll Outer Diameter:
Up to 1080 mm



Denest / Antiblock Treatments:
Surface Silicon / Internal Masterbatch

PROPERTIES

Typical Observed Values		ASTM
Specific Gravity	1.33 g/cm ³	D1503
Tensile Strength	> 50 mpa	D882
Light Transmission	> 86 %	D1003
Thermoforming Temperatures	121° to 154°	

CERTIFICATIONS

- ISO 9001:2015
- ISO 14001:2015
- British Retail Consortium (BRCGS – issue 6)
- ISO 45001:2018
- ISO 17025:2017
- Halal Certification
- Kosher Certification
- USA FDA CFR 21 section 177.1630
- EU Regulation 10/2011,
- CONEG Regulations (USA/ CANADA) for heavy metal content
- EU 1616/2022 on Recycled Plastic Material for food contact

CONTACT US

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