



Innovating
our sustainable
tomorrow

Rigid Packaging

High-Performance
Sustainable Plastic Solutions



Innovating our sustainable tomorrow

GCR develops and produces high-performance sustainable plastic solutions, serving brand owners and plastic processors seeking **reliable recycled polyolefins and advanced mineral-based compounds**.

We unlock value for our partners, enabling their **growth** and enhancing their market position thanks to our firm commitment to **innovation** and **sustainability**.

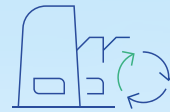
As a result, our materials are more environmentally friendly, **lowering the carbon footprint and reducing virgin plastic use without compromising the features and performance expected from virgin plastics**.

A global benchmark



Founded in

2001



Production facilities

2 production plants

La Bisbal del Penedès,
Castellet i La Gornal



Headquarters

La Bisbal del Penedès

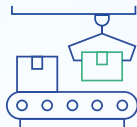
Tarragona (Spain)



+300

Employees

24 nationalities



Production Capacity

+500.000 MT/y



International presence

+100 countries

Europe/ Asia/ America/ Africa



Your partner for sustainable solutions



LEADING PRODUCTION CAPACITY IN EUROPE

- 425,000 mT/y compounds.
- 130,000 mT/y pre-consumer & post consumer.
- 20+ years of experience.
- Operational efficiency from strategic plant proximity.



RELIABLE CONSISTENT SUPPLY

- Robust long-term material sources.
- Installed production capacity.
- Guaranteed Supply Security.
- Monitoring traceability.



INNOVATION HUB

- Agile go-to-market solutions.
- Industrial Scale Pilot Plant & Lab technology.
- Co-creation space to facilitate collaborative innovation.
- 50+ Expert technical advisors.
- Customization Capabilities.



SUSTAINABILITY

- 17 years pioneers in Carbon Footprint Calculation.
- 274,440* tonnes of CO₂ per year avoided by replacing virgin material
- Driving the Circular Economy.

* Information based on 2024 annual calculation.



Quality Obsession

- Aligned with ISO9001 & ISO14001 standards.
- Quality consistency through rigorous performance monitoring.
- State-of-the-art technology.
- Fully certified product portfolio.





Certifications

Committed to the highest standards



ISO 9001

Quality Management system

ISO 14001

Environmental Management system



ISO 14067

Carbon Footprint



ISCC PLUS

Circular and bio-based products



UNE - EN 15343

Recycled Content & Traceability



Recyclass

Recycling Process for pre-consumer & post-consumer



Biodegradability

Home & Industrial Compost, Soil Compost



CERTIFICADO POR
AENOR

OCS - Operation Clean Sweep

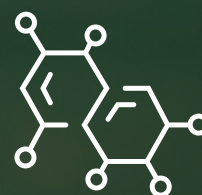
Zero Pellet Loss



GCR Minimizing the environmental impact



Prioritizing the purchase of raw materials in bulk to avoid overpackaging and reduce waste generation.



Ensuring balanced consumption of petrochemical compounds by using materials that reduce reliance on virgin polymers.



Striving for zero waste by recovering plastic materials already in circulation or from the packaging of received materials and converting them into raw materials for Ciclic products.



100% solar roof coverage at GCR's La Bisbal facilities, boosting clean energy from 520,000 kWh in 2022 to 1,579,000 kWh in 2024



Calculating the carbon footprint of our products in accordance with the ISO 14067 Carbon Footprint standard.



Making our packaging more sustainable by optimizing and redesigning it to offer a lower carbon footprint and increased usability.



Life Cycle Assessment

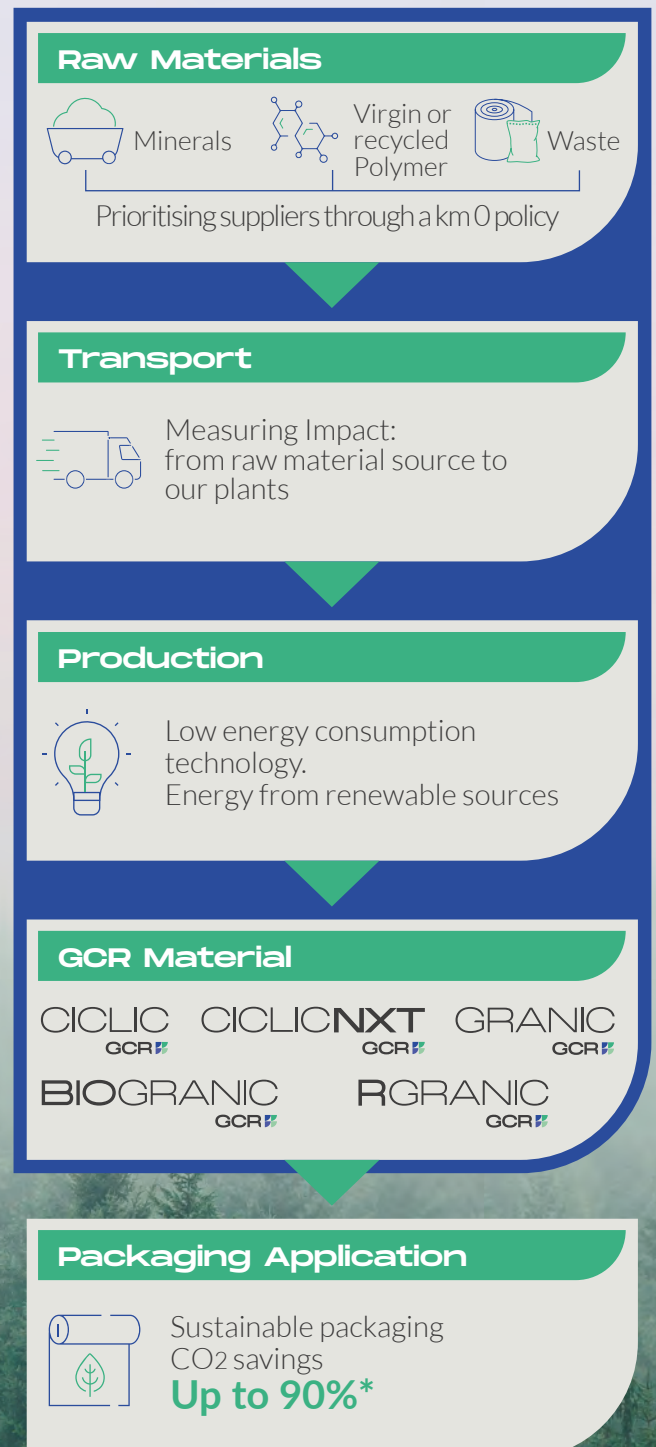
We know that every step matters

LCA is a systematic approach that evaluates the environmental impact of a product or service throughout its entire life cycle, from raw material extraction to disposal.

BENEFITS: calculating the LCA enables customers to make environmentally conscious choices, sustainable fuel demands, support responsible businesses and collectively contribute to a more sustainable future. businesses, and collectively contribute to a more sustainable future.

- Informed decision-making
- Comparative analysis
- Eco-friendly design
- Reduced environmental footprint

We conduct **Cradle-to-Gate Life Cycle Assessments** for our products in compliance with the ISO 14040 series, and our carbon footprint is certified according to ISO 14067.



*Our products can potentially reduce CO2 emissions by up to 90% in specific applications. However, actual reductions may vary based on the final application and the product used. We work with customers to identify suitable products for optimal CO2 reduction.

Accelerating Your Go-to-Market with Sustainable Innovation and Advanced Capabilities

An Innovation Hub equipped with cutting-edge technology

GCR Innovation Hub provides a unique **2,000 m² co-creation space** where partners can run collaborative projects and benefit from our technical expertise, advanced capabilities, and cutting-edge technology.

With a team of more than **50 experts**, we generate tangible results during **in-house collaboration sessions**, working directly with our clients to solve technical challenges and accelerate development.

+50 Expert Technical Advisors



Over 50 experienced technical advisors are ready to provide guidance and support at every stage of your project.

Testing & Homologation



Sustainable material science applied to new formulations, pilot plant trials, laboratory analysis, testing, and upscaling to production.

Dedicated R&D Centre



Developing solutions that minimise environmental impact while maintaining material performance.

Industrial Scale Pilot Plant

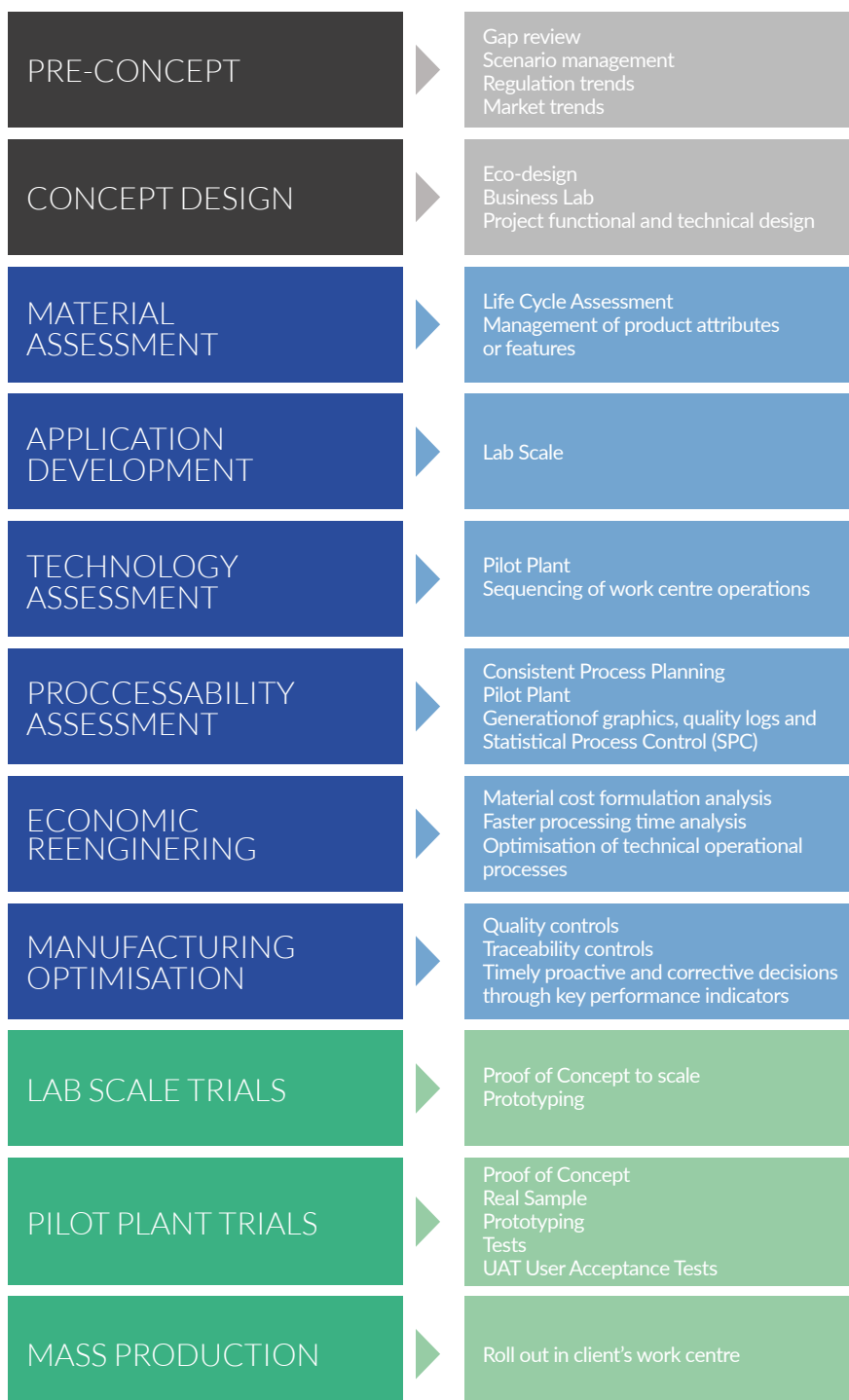


Supporting incubation and proof of concept, from development and pilot trials to final large-scale production.

Together, we can turn your product challenges into Success Stories

Supporting developments at any stage

End-to-end-solutions



Our Deliverables

- ▀ Co-creation space
- ▀ Discovery of new ideas
- ▀ Accelerate action to circularity
- ▀ Turnkey Projects
- ▀ Recyclability Consultancy Services

Note: Developments are subject to volume threshold and binding agreement

Sustainable Rigid Packaging

Understanding
industry challenges



Rigid Packaging

Understanding industry challenges

CUSTOMER NEEDS & TRENDS

Businesses are actively refining packaging designs to:

- Create memorable **experiences**.
- **Stand out** in the market.
- Address **environmental** concerns.
- Meet sustainability goals.

OUR EXPERTISE

At GCR, **we work to make sure you don't have to sacrifice PERFORMANCE for improved SUSTAINABILITY.**

At our Innovation Hub we create, test, and improve sustainable solutions.

STANDARD PACKAGING REQUIREMENTS

The following requirements are likely to resonate with you, and that's precisely where our expertise lies:

- Durability.
- Lightweight.
- Product Preservation.
- Secure Storage.
- Prolonged Shelf Life.
- Thin-walled.
- Aesthetic Appeal.
- Packaging Versatility.
- Sustainability.
- Eco-friendly solutions that use recyclable, biodegradable and/or natural origin materials.
- Reducing Carbon Footprint.



Rigid Packaging Challenges

Rigid packaging producers must balance material performance, recycling compatibility, and sustainability targets.

Performance Challenges

- ▮ High-quality packaging performance
- ▮ Effective barrier performance
- ▮ Smooth processability and line efficiency
- ▮ Consistent specifications and aesthetics

Recycling Challenges

- ▮ Consistent recycled material performance
- ▮ Matching the performance of virgin polyolefins
- ▮ Narrow and stable material specifications
- ▮ SOIs and contamination under control
- ▮ Material compatibility in recycling streams
- ▮ Reliable feedstock sources

Carbon Footprint & Resource Efficiency

- ▮ Reduced reliance on virgin polymers
- ▮ Mono-material designs for recyclability
- ▮ Lower carbon footprint and material use
- ▮ Verified recycled or renewable materials
- ▮ End-of-life compatibility with recycling systems

Rigid Packaging Solutions

Finding sustainable solutions that can meet the required properties and performance is key to reduce the environmental impact of flexible packaging.

PRODUCT PORTFOLIO

Recycled Polyolefins

CICLIC **CICLICNXT**
GCR  GCR 

Ciclic® is a high-quality recycled and recyclable polyolefin product line.

Advanced Mineral Masterbatches

GRANIC
GCR 

RGRANIC **BIOGRANIC**
GCR  GCR 

Granic® is our high-performance mineral-based concentrate product line.

SERVICE LEVELS

- ▮ Technical Service
- ▮ Material Traceability
- ▮ Certifications
- ▮ Cradle to Gate LCA Calculation (backed by UNESCO Chair in Life Cycle and Climate Change)

INNOVATION HUB

Unmatched expertise and resources, driving innovations to tackle market challenges effectively.

Customisation possibilities*.

Driving the Circular Economy

- ▮ Understanding PCR Upcycling
- ▮ Designing for recyclability
- ▮ Assessing Recyclability

Enhancing Performance and Sustainability

- ▮ Innovative Compatibiliser Technology
- ▮ Neatly Blending & Odourless Technology
- ▮ Lightweight Solutions
- ▮ Reducing Carbon Footprint and improving LCA

*Subject to MRQ and LT agreements

Sustainable Rigid Packaging Solutions



Caps & Closures

CICLIC® rPP

CICLIC® rPP enables the replacement of virgin polypropylene in caps and closures while maintaining stable processing and part quality. Produced from pre-consumer and post-consumer recovered plastics, this recycled polypropylene grade is specifically formulated for injection moulding applications.

KEY ADVANTAGES

- ▶ **High Incorporation Rates:** Enables significant recycled content integration in manufacturing processes.
- ▶ **Stable Material Quality:** Ensures consistent processing and reliable production performance.
- ▶ **Good Demoulding Behaviour:** Facilitates easy release from moulds, improving production efficiency.
- ▶ **Good Flowability in Mold:** Uniform distribution within mold's cavities for consistent part quality.
- ▶ **Low Odour:** Provides a more pleasant processing environment and improved end-product experience.

SUSTAINABILITY

Composition Example:

Reference: 100% virgin PP

New formulation: 30% to 100% Ciclic rPP

▼
**27% to 90%
CO₂ reduction
compared with virgin PP**

- ▶ Lower Carbon Footprint.
- ▶ Carbon footprint verified according to **ISO 14067**
- ▶ Full Life Cycle Assessment (LCA) available for CICLIC® products.



Product Carbon
Footprint
Regular
Surveillance

www.tuv.com
ID: 9105057179



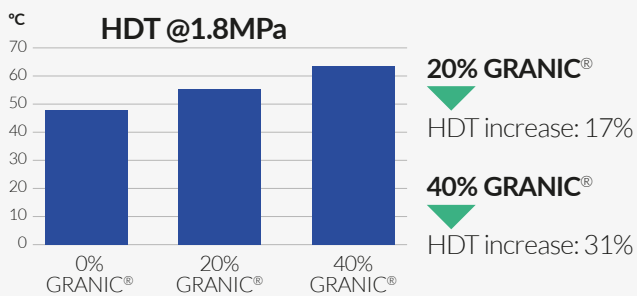
RecyClass

RECYCLING
PROCESS
EN 15343



Hot food trays

HEAT RESISTANCE



KEY ADVANTAGES

- Enhances the HDT of injection-moulded or thermoformed parts*
- Improves dimensional stability (reduces warpage by up to 25%)
- Reduces cycle time
- Maintains mechanical performance
- Improves demoulding behaviour
- Reduces stress whitening
- Maintains part weight and dimensional accuracy

*HDT: Heat Deflection Temperature

SUSTAINABILITY

Composition Example:

Reference formulation: 100% PP + talc compound
 Alternative formulation: 60% PP + 40% GRANIC® PP

28% CO₂ reduction



- Lower Carbon Footprint.
- Energy Efficiency.
- Carbon footprint verified according to **ISO 14067**
- Full Life Cycle Assessment (LCA) available for GRANIC® products.

GRANIC® PP / Talc

GRANIC® PP – Talc is a functional mineral masterbatch compliant with EU and FDA food contact regulations.

In food packaging applications, GRANIC® PP – Talc **increases the part's heat resistance, reduces warpage, and improves process efficiency** without compromising mechanical properties.



Reusable Cups & Trays

GRANIC® PP | Ultra-fine CaCO₃

GRANIC® PP | Ultra-fine CaCO₃ is a functional mineral masterbatch designed to enhance stiffness, dimensional stability, and thermal performance in polypropylene applications.

This product range provides an optimal balance of mechanical performance, opacity, and processing efficiency.

KEY PERFORMANCE BENEFITS

- ▀ **Mechanical Properties:** Significantly increases impact strength and stiffness, supporting durable and reusable packaging applications.
- ▀ **Dimensional Stability:** Enhances heat deflection temperature (HDT) and reduces shrinkage, improving dimensional stability and part consistency.

KEY ADVANTAGES

- ▀ **Enhanced Opacity:** Provides enhanced opacity, reducing the need for additional color masterbatch.
- ▀ **Improved Thickness Distribution:** Improves thickness distribution, minimizing warpage and supporting consistent part quality.
- ▀ **Thermal Efficiency:** Higher thermal conductivity improves heat transfer during sheet pre-heating and part cooling, increasing production efficiency.

SUSTAINABILITY

Composition Example:

Reference formulation: 100% PP

Alternative formulation: 83% PP + 17% Granic® PP

14% CO₂ reduction compared with virgin PP



- ▀ Reduced carbon footprint
- ▀ Improved energy efficiency
- ▀ Carbon footprint verified according to **ISO 14067**
- ▀ Full Life Cycle Assessment (LCA) available for GRANIC® products.



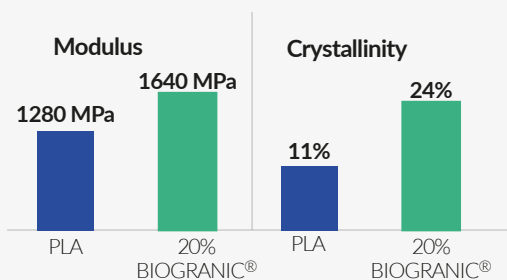
Compostable coffee capsules

BIOGRANIC®

PERFORMANCE

Composition Example: PLA + 20% BIOGRANIC®

- Increases crystallinity by 15%.
- Improves Impact Resistance (Modulus) by 30%.



KEY ADVANTAGES

- Enhances output and process stability, ensuring a more uniform thickness distribution through improved plasticization.
- Significantly improves impact resistance and heat deflection temperature in PLA.
- Offers a cost-effective solution, enhancing the processing and performance of common biodegradable thermoplastics.
- Reduces brittleness, facilitating easier handling.

SUSTAINABILITY

BIOGRANIC® is certified according to:

- OK Compost INDUSTRIAL
- OK Compost HOME.

Lower Carbon Footprint solution.



BIOGRANIC® is a mineral masterbatch with a unique mineral blend and biodegradable thermoplastic resin for compostable bioplastics in rigid applications. This **unique combination enhances the value of compostable bioplastics by improving performance**, reducing formulation costs, and optimizing the production process.



Household Goods

GRANIC® PP – Talc

GRANIC® offers PP + talc mineral-based solutions designed for the injection moulding market. These solutions enhance the strength and stiffness of end products, providing an efficient alternative to traditional talc compounds.

PERFORMANCE

- ▶ 40% GRANIC® + 60% Virgin PP can replace a PP Compound with 30% Talc.
- ▶ GRANIC® makes the piece stiffer and tougher than Talc compound.
- ▶ GRANIC® PP – Talc gives the finished part a more consistent look.

KEY ADVANTAGES

- ▶ Excellent Dimensional Stability.
- ▶ More Autonomy in the final formulation.
- ▶ Raw Material Savings.
- ▶ Delivers Improvement in Processing Process.
- ▶ Cycle time reduction (cooling time).

SUSTAINABILITY

Composition Example:

60% Virgin PP + 40% GRANIC® PP -Talc.

29% CO₂ reduction



- ▶ Reduced carbon footprint
- ▶ Improved energy efficiency
- ▶ Carbon footprint verified according to **ISO 14067**
- ▶ Full Life Cycle Assessment (LCA) available for GRANIC® products.



Bins, drums & Baskets

CICLIC® & GRANIC® Solution for Injection Moulding Applications

GRANIC® KEY ADVANTAGES

- ▀ **Matte** appearance.
- ▀ Reduced **cycle time and energy consumption**.
- ▀ Excellent **dimensional stability**.
- ▀ **Warpage** improvement.
- ▀ Prevents **demoulding** issues.

CICLIC® KEY ADVANTAGES

Standard polypropylenes **highly consistent** across batches ready for **long term supply commitments**.

- ▀ Up to **100% replacement rate**.
- ▀ Grades with **MFR** ranging from 5 to 20 g/10 min (230° / 2.16 Kg).
- ▀ Good dispersion in mold.
- ▀ White, black and grey grades for injection.

SUSTAINABILITY

28% CO₂ reduction



At 40% virgin polymer replacement rate

SUSTAINABILITY

89% CO₂ reduction



At 100% virgin polymer replacement rate

- ▀ Reduced carbon footprint
- ▀ Improved energy efficiency
- ▀ Carbon footprint verified according to **ISO 14067**
- ▀ Full Life Cycle Assessment (LCA) available for GRANIC® and CICLIC®.

GRANIC® and CICLIC® combine mineral masterbatch and recycled polyolefins to deliver high-performance and more sustainable solutions for injection moulding applications.

GRANIC® provides advanced mineral-based formulations that enhance mechanical properties, improving the strength and stiffness of finished parts.

CICLIC® offers high-quality recycled polyolefins that enable the replacement of virgin materials while maintaining consistent performance and reducing environmental impact.

Together, they enable robust and durable solutions, ideal for rigid packaging applications.

Custom-made compounds available upon request.



Bottles

GRANIC® HDPE | Ultra-fine white CaCO₃

GRANIC® delivers advanced mineral solutions for extrusion blow moulding, designed to improve performance while maintaining material integrity.

By enabling downgauging, it supports productivity gains, reduces material consumption, and contributes to lower carbon footprint.

PERFORMANCE

- **Cycle Time Reduction:** Up to 8%, boosting throughput.
- **White Masterbatch Savings:** Reduces the need for additional whitening agents, lowering costs

KEY ADVANTAGES

- Superior opacity and whiteness for improved aesthetics.
- Supports thinner walls while maintaining strength, reducing HDPE usage.
- Boosts productivity with up to 8% faster cycle times.
- Enhances dimensional stability and reduces stress whitening.
- Preserves mechanical properties even in thinner designs.

SUSTAINABILITY

Composition Example:

91% HDPE | 8% GRANIC® | 1% White MB

6% CO₂ reduction



- Reduced carbon footprint
- Improved energy efficiency
- Carbon footprint verified according to **ISO 14067**
- Full Life Cycle Assessment (LCA) available for GRANIC® products.



PERFORMANCE

Proven performance in demanding conditions:

- ▀ **Top load & drop test:** Equivalent performance to 100% virgin HDPE bottles
- ▀ **ESCR (ASTM D1693, 10% Igepal):** 107h, equivalent to virgin HDPE
- ▀ **Industrial validation:** Tested in 3L detergent bottle production

KEY ADVANTAGES

- ▀ **High PCR Content:** Up to 50% PCR validated in demanding applications
- ▀ **Consistent Processing:** Stable extrusion blow moulding performance
- ▀ **Reliable Quality:** Homogeneous and repeatable across batches
- ▀ **Mechanical Performance:** Strength and durability comparable to virgin HDPE

SUSTAINABILITY

Composition Example:
From 50% to 100% CiclicrHDPE

45% to 90% CO₂ reduction



- ▀ Reduced carbon footprint
- ▀ Carbon footprint verified according to **ISO 14067**
- ▀ Full Life Cycle Assessment (LCA) available for CICLIC® products.
- ▀ Supports compliance with recycled content requirements (PPWR)
- ▀ Enables high PCR use in demanding applications

CICLICNXT® rHDPE

CICLICNXT® rHDPE is a high-performance post-consumer recycled polyolefin designed for extrusion blow moulding, enabling up to 50% PCR while maintaining mechanical properties comparable to virgin HDPE.

Validated in 3L detergent bottles under industrial conditions.

Ideal for homecare and industrial bottles requiring high durability and ESCR performance.



Transport Packaging

GRANIC® PP | Talc

GRANIC® supports high-performance transport packaging with advanced PP + talc solutions, enabling stronger and stiffer end products.

Compared to conventional additives, these solutions deliver improved durability in demanding applications.



PERFORMANCE

- Compression strength: 3 stacked boxes = 2.6t
- Withstands 4 meters height at -30°C
- Maintains weight with excellent durability

KEY ADVANTAGES

- Excellent dimensional stability and warpage control
- Faster cycle times (3 seconds reduction)
- Improved demolding and reduced stress whitening
- Stronger with less material for weight-balanced designs

SUSTAINABILITY

Composition Example:

89% Virgin PP + 11% Granic® PP - |Talc

8% CO₂ reduction



- Reduced carbon footprint
- Improved energy efficiency
- Carbon footprint verified according to **ISO 14067**
- Full Life Cycle Assessment (LCA) available for GRANIC® products.

Foldable Boxes & Containers

CICLIC® & GRANIC® Solutions for Corrugated PP Sheets

PERFORMANCE

- +20% line speed increase*
- >9% material reduction*
- >15% energy saving potential*

KEY ADVANTAGES

- Improved stiffness–impact balance for optimized sheet performance
- Higher output and line speed (validated industrial gains)
- Reduced material consumption with same GSM
- Consistent surface quality for printing and conversion

SUSTAINABILITY

Composition Example:

Reference formulation: 100% virgin PP
 Alternative formulation: CICLIC® rPP + GRANIC® PP solutions

47% CO₂ reduction

- 47% CO₂ reduction validated in industrial production*
- More than 50% recycled PP content*
- 100% recyclable solution
- Full LCA available



Product Carbon Footprint Regular Surveillance
 www.tuv.com
 ID: 3105057179



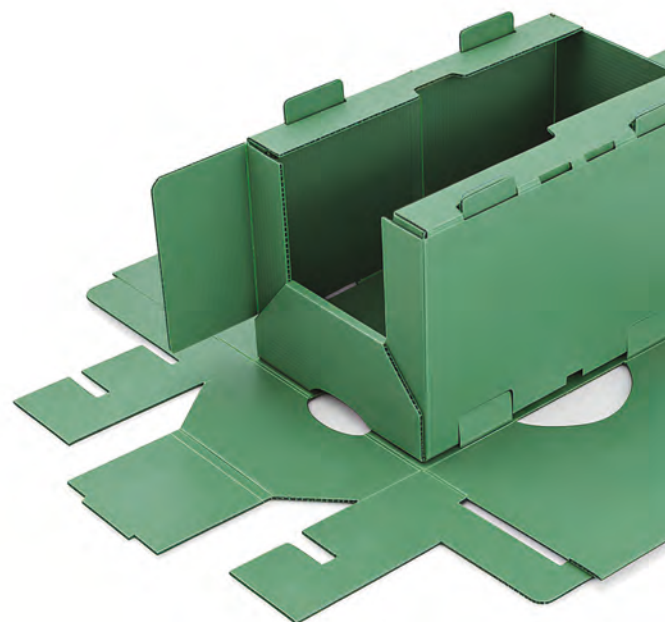
Advanced formulation solutions combining **CICLIC®** rPP and **GRANIC®** mineral masterbatches to deliver measurable performance and productivity gains in corrugated PP sheets.

Engineered and validated for demanding industrial applications.

GRANIC® enhances stiffness and dimensional stability, improving wall structure and process control.

CICLIC® rPP enables high recycled content while maintaining mechanical performance and consistency across production.

Industrial validation:
 OMIPA corrugated PP sheet production



CICLICNXT

GCR®

**Next-Level
Solutions
in PCR
Polyolefins**
High-quality
PCR at scale



CO₂
SAVINGS
UP TO
90%

High-quality sustainable plastics for rigid packaging

Comprehensive packaging solutions.

PERFORMANCE & SUSTAINABILITY

Our innovative materials combine the best of both worlds: an exceptional performance and a commitment to sustainability.

We work to ensure you don't have to sacrifice PERFORMANCE for improved SUSTAINABILITY.

CHALLENGES

We understand and solve flexible packaging challenges such as superior durability, **barrier properties**, hermetic sealing, good **printability** or **smooth processability**, offering design flexibility to enhance recyclability and reduce CO₂.

INNOVATION HUB

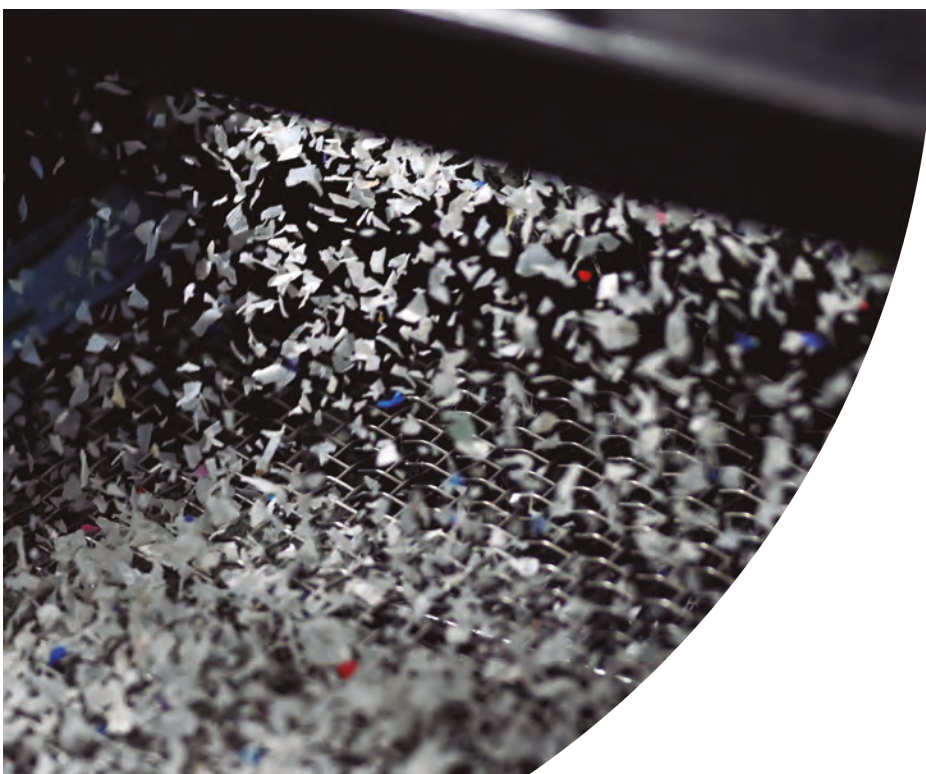
We can support **customised solutions at any stage of the development** process through our innovation hub capabilities. Testing and homologation services can be offered in-house or on the customer's premises.

TRACEABILITY

Our plastics are sourced responsibly, incorporating recycled content and renewable resources that are traceable throughout our manufacturing process. This not only reduces our carbon footprint but also promotes a circular economy.

COMPREHENSIVE SOLUTION

Join us in revolutionising packaging – where excellence meets sustainability.





GCR Headquarters **Sustainable Plastic Solutions**

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Production Plants

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Castellet i la Gornal

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Let's get in touch

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Benelux
France
Iberia
Italy
Nordics
Poland
Turkey
UK & Ireland

Latam & North America

Latam
North America

Asia & Africa

Asia
Africa

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The images of applications shown are for illustrative purposes only and may not precisely represent actual final applications or performance.

GRANIC® has the potential to reduce CO₂ emissions by up to 50% at dosages around 70%. However, actual CO₂ reductions may vary depending on the specific application, processing conditions, and product formulation used.

CICLIC® has the potential to reduce CO₂ emissions by up to 90% in your product formulations. Actual emission reductions may vary based on the final application, product formulation, and specific usage conditions.

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