

# Granic™ Environmentally friendly plastic solutions



Granic™ is the brand from the GCR Group, the European leader and worldwide reference benchmark in the manufacture of mineral plastic concentrates for the processing industry. Plastribution has been the GCR Group's UK distribution partner since 2011.



## Realising the Granic™ Potential

Granic™ mineral masterbatches are commonly used in the processing of polymer to reduce costs in manufacturing, reinforce polymers and provide a sustainable environmental option to processors 

## New Granic™ grade for blow moulding and film applications

GCR producers of the Granic® range of mineral filled masterbatches, has a grade recommended for blowmoulding applications using high density polyethylene (HDPE). The change of carrier from LLDPE to HDPE allows high addition rates with the subsequent reduction in production costs without a reduction in stiffness in the finished goods. 

## GCR Expansion

Granic™ is the largest producer of filler masterbatches in Europe. A brief article detailing the expansion of the company to meet the growing demand for its innovative, cost effective and sustainable products. 

A large, semi-transparent background image showing a pair of hands holding a large quantity of small, grey, irregularly shaped granules. The hands are positioned as if they are about to release the granules, which are piled up in the center of the palms.

**Read on for more information >**

# Realising the Granic® potential



The Granic® range of additive materials, which are characterised by their high calcium-carbonate content, are already gaining the attention of UK plastic processors seeking to achieve greater manufacturing efficiency. The additive can be added to almost all types of polymers, including polyethylene, polypropylene or polystyrene derivatives, at dosages of up to 60 percent depending on application. Benefits of Granic® in moulded parts include significant efficiencies in terms of output and energy costs, in film applications the use of Granic can lead to improvements in mechanical performance and production efficiency.

"One company, a manufacturer of cling film dispensers made from high impact polystyrene, is looking to add up to 15 percent of Granic to the polymer to help improve the stiffness and strength of the product, whilst simultaneously reducing the thickness of the moulded sections," reports Chris Green, business development manager at Plastribution. "For this particular customer, the adoption of Granic® will equate to an approximate cost-saving of around 8 percent versus the use of unmodified HIPS and a carbon saving of around

60 tons per annum." Thanks to its high natural mineral content, Granic® is less than 25 percent dependent on oil for its production and thus has a significantly lower carbon footprint than polymers. Moreover the price of Granic® is not only significantly lower than purely fossil-fuel based equivalents but is considerably more stable.

A second UK company, in this case a producer of blow-moulded pill bottles, has also been quick to recognise the Granic® potential. During trials conducted by the customer, an addition rate of Granic® at 20 percent has led to a reduction in cycle time for each bottle from 10.7 to 9.4 seconds. "The improved thermal conductivity of Granic® meant that cycle times could be reduced, as the moulding cools more quickly, whilst less heat input is required for processing in the first place," explains Chris Green. "For high volume products such as pill bottles, benefits can result in not only a reduced cost per part due to the use of a lower cost material, but also significant efficiencies in terms of output and energy usage per part." At the same time, the reinforcing properties of the ultrafine calcium carbonate granules in the polymer matrix has allowed

the processor to down-gauge the thickness of the bottle neck without sacrificing stiffness. "The overall weight saving per bottle is around 11 percent," declares Green.

A key property of Granic® is its ability to be loaded at high levels without any detrimental effect to the processing method being used. This is due to Gestora's advanced mixing technology, allowing them to produce materials with ultra low melt flow resin carriers. This, coupled with their use of ultrafine treated calcium carbonate, removes many of the historical barriers to filler use in polymers.

Plastribution has been the sole distributor in the United Kingdom of the Granic® range of highly calcium carbonate filled polymers, produced by Gestora Catalana de Residuo of Spain, since the start of 2011. Further information on Granic® can be found at [www.granic.es](http://www.granic.es).

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Granic®  
Our product,  
your solution.

# New Granic® grade for blow moulding and film applications



Gestora Catalana de Residuos, producers of the Granic® range of calcium carbonate and talc filled plastic masterbatches, has introduced a new grade recommended for blow moulding applications using high density polyethylene (HDPE).

In contrast to the previously recommend grade, new Granic® 762 uses a very low melt flow special copolymer HDPE base carrier resin with a calcium carbonate content of 80%, as Chris Green, Business Development Manager at Plastribution, explains: "The use of the previous linear low density polyethylene (LLDPE) based grades at higher addition rates was found to reduce modulus and tensile properties in some cases and to cause some issues in processing, particularly with very large blow mouldings.

The new grade addresses these issues by utilising a low melt flow HDPE carrier that will have no adverse effect at higher loadings over 15 percent or more."

The base carrier resin used in Granic® 762 is a high molecular weight

HDPE copolymer that provides the finished article with a higher e-modulus than was previously achievable with a LLDPE carrier.

At the same time, the use of the ultrafine calcium carbonate granules in the polymer matrix permits the down-gauging of wall thickness in blow moulded articles such as bottles and containers without sacrificing mechanical, flexural and drop impact properties.

Further benefits of the new grade include the use of a particularly white form of calcium carbonate that facilitates a reduction in the amount of titanium dioxide required to produce blow-moulded white bottles and white films.

Moreover, as calcium carbonate is not a pigment, Granic®762 is also suitable for use in the production of coloured bottles. Finally, as HDPE is not transparent, a loading of Granic® 762 of up to 10 percent is possible (depending on wall thickness) in natural HDPE bottles and films without any discernible change in visual appearance.

"Our full commercial introduction of Granic®762 was in April this year, and already several big customers are placing regular orders that can be measured in truck loads," reports

Victor Oliva, Commercial Director at Gestora Catalana de Residuos. "We see a huge potential in this material, with a major producer of "probiotic" yogurt-type drinks already trialing its use in Europe and Latin-America."

The Granic® range is characterised by the high purity preparation and treatment of the calcium carbonate used in the masterbatch. The additive can be added to almost all types of polymers, including polyethylene, polypropylene or polystyrene derivatives, at dosages of up to 60 percent depending on application.

Benefits of Granic® in moulded parts include significant efficiencies in terms of output and energy costs. In film applications the use of Granic® can lead to improvements in mechanical performance and production efficiency.

Plastribution has been the sole distributor in the United Kingdom of the Granic® range of highly filled calcium carbonate compounds since 2011. 

Further information on Granic® can be found at [www.granic.es](http://www.granic.es).

# GCR Group expansion

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GCR Group is the new company name for the producer of the Granic® range of masterbatch.

The company formerly known as Gestora de Catalana de Residuos started production in 2001 locally recycling PE and PP. The company had three distinct business areas namely Granic®, Ciclic and Irton and the name change brings them all under the GCR Group.

Granic® is the largest producer of filler masterbatches in Europe. With a compounding capacity of 110 000mT the company will have doubled this to 220 000mT by the end of the year. By the end of Q2 2013 Granic® will start up their 3rd compounding line with its own Irton technology.

This will be further complemented by a 4th line in early 2014 and this is expected to be at full capacity by the summer. The plant, which is ideally situated locally to its polymer feed stock supplier (20km) and the

largest source of high quality plastic grade calcium carbonate (7km). In addition the world's largest talc mine is less than 200km away.

"Granic's aim is to fulfil the needs of the plastics converters regarding plastic reinforcement, oil based polymer replacement, lowered environmental impact, carbon footprint reduction (through certification), reduced energy consumption and help converters achieve a reduction in the cost of their finished goods" comments Victor Oliva the commercial director at GCR.

The extremely pure, ultra-fine calcium carbonate that is used in production of Granic® materials is surface treated and carries certification to that effect. This ensures that these products do not absorb moisture and therefore require no drying and provide trouble free