

MICROPELLET TECHNOLOGY

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MICROPELLET $\leq 1.0\text{mm}$ MINIPELLET $< 2.0\text{mm} > 1.0\text{mm}$

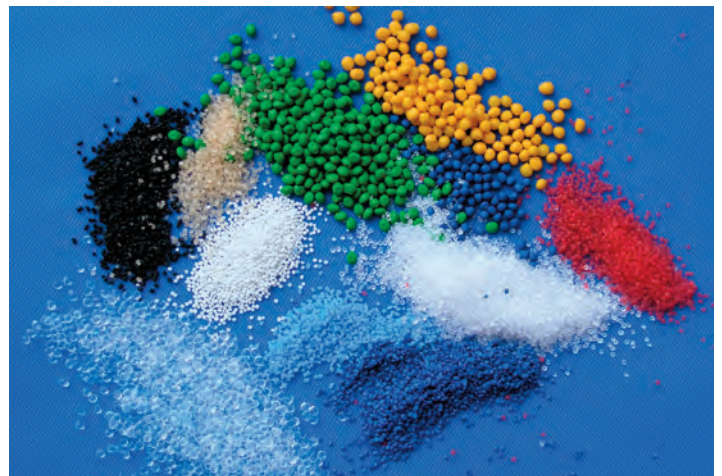
Gala began producing micropellets in 1980. Since that time the capability of our machines to cut increasingly smaller micropellets has advanced considerably by developing improvements to both equipment and processing technology. Gala now has a dedicated team to address micropellet inquiries and to ensure the best equipment is chosen for each application.

To produce micropellets, the polymer melt must be supplied at high pressure to the die plate. It should also be filtered to prevent blocking of the die plate holes, which would require the use of a gear pump and screen changer.

At the die head a polymer diverter valve will direct melt accurately to the die.

The die plates themselves are configured to cope with the various demands of the different applications including the use of extra low pressure designs, very thermally efficient characteristics and appropriate hole configurations. The selection of cutter hubs, like the selection of die plates, is derived from many years of extensive experience in this area.

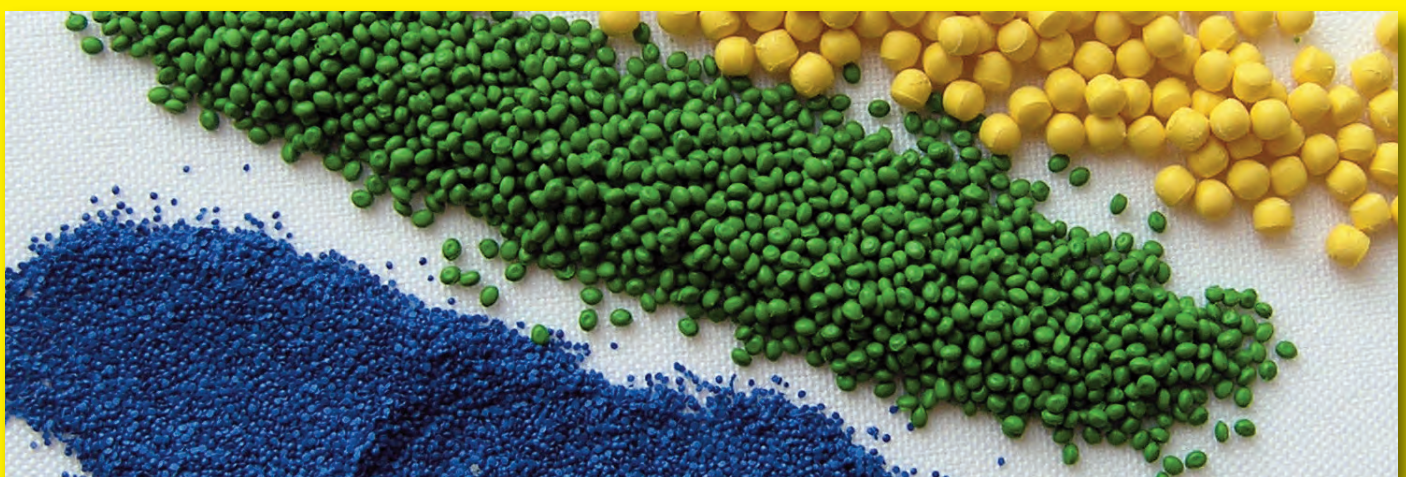
The micropellet tempered water systems are variants of the successful standard Gala units, and feature Gala centrifugal dryers suitable for the micropellet application. Special high performance ML screens enhance the drying efficiency.



An assortment of micropellets produced using Gala equipment and technology

Gala micropelletising systems are customised to suit the size and output specification of the production requirement. We can supply lab units as well as large production units for micropellet applications.

The nature of the material will determine the minimum pellet size possible, but certainly sizes of 400-500 microns are common.



ADVANTAGES & BENEFITS

- BETTER FLOWABILITY
- VIRTUALLY DUST-FREE
- POTENTIALLY FASTER COOK TIMES / REDUCED COOK TEMPERATURES
- BETTER COLOR DISTRIBUTION



APPLICATIONS

The first question most people ask when confronted with very small micropellets is, "What are they used for?" This is why the Gala micropellet team is application oriented. It is not unusual to find us involved with the end process.

Major applications include:

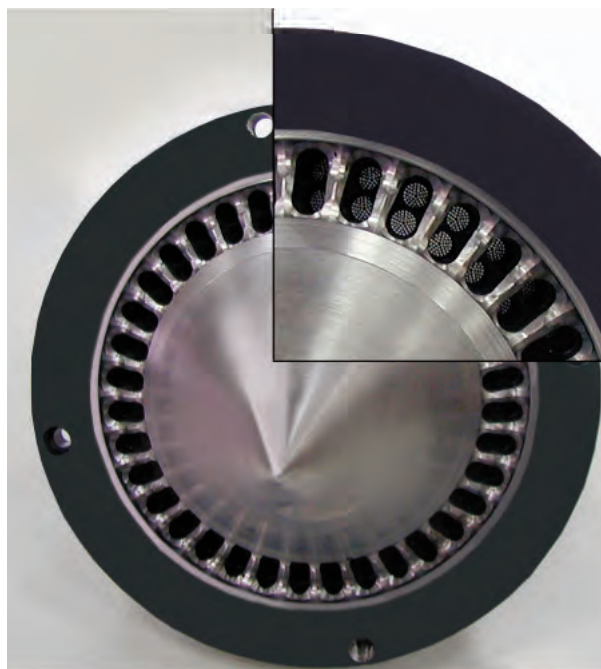
Rotomolding – Micropellets offer advantages not only for small intricate technical mouldings, such as offering higher bulk density and high part definition, but also for large part mouldings where reduction in cycle times or temperatures are experienced.

A major advantage over powder is the elimination of the two-step compounding and grinding operations, replacing it with the single step compounding micropelletizing operation. Most importantly, micropellets offer a dust free alternative to powder.

Masterbatch – Minipellets and micropellets allow very accurate dosing at low rates (eg. for transparent colours). These minipellets allow for better distribution, giving a high-end premium product quality.

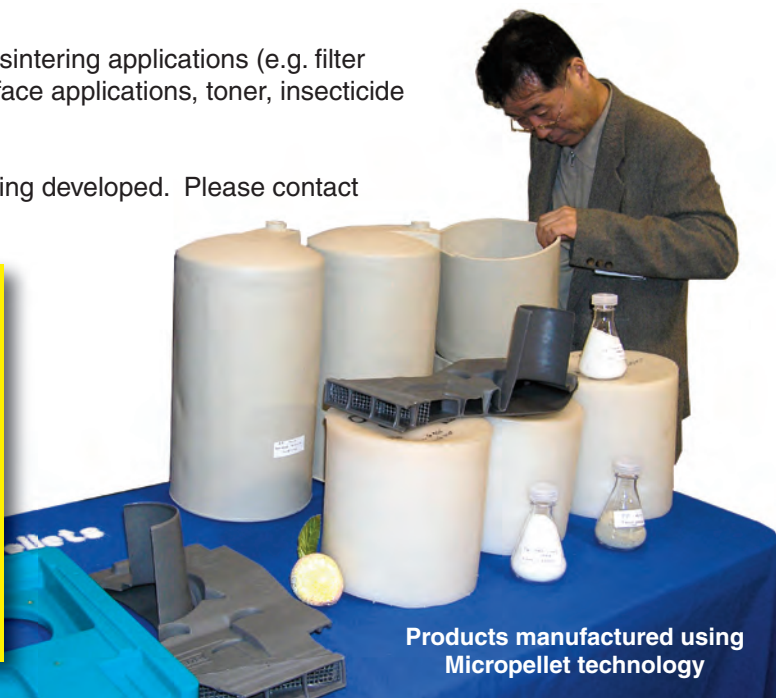
Other applications are wide and varied, but include sintering applications (e.g. filter media), clothing decoration, flooring and sports surface applications, toner, insecticide applications, etc.

New applications for micropellets are continually being developed. Please contact Gala to discuss your needs.



Gala Micropellet Die Plate for small pellets

LLDPE • LDPE • MDPE • HDPE
XLHDPE • PP CoPo • PP Homo
TPO • TPU • Polycaprolactone
PA66 • PA6 • PA11 • PA12 • PC
PET – Co • PET – G • EVA • PB
ABS • PVdF • PVC – flex • PS
EPS • CPE • Toner • TPEV • TPE
Some wax type materials



Products manufactured using Micropellet technology

Gala technology is protected, in whole or in part, by one or more issued U.S. and foreign patents, with other domestic and foreign patents pending. Patents include US Patent Nos. 5,265,347; 5,403,176; 5,624,688; 5,638,606; 6,138,375; 6,237,244; 6,332,765; 6,551,087; 6,739,457; 6,793,473; 6,807,748; 6,824,371; 6,925,741; 7,024,794; 7,033,152; 7,157,032; 7,171,762; 7,172,397; 7,267,540; 7,318,719; 7,393,484; 7,402,034; 7,421,802; 7,524,179; and related foreign patents; All logos, trademarks, and service marks (hereafter referred to as "Trademarks") displayed herein whether or not appearing in large print or with or without the trademark symbol are registered and unregistered Trademarks of Gala or of third parties. Gala Trademarks are protected by one or more registered U.S. and foreign trademarks, with other domestic and foreign trademarks pending. All original works of authorship displayed herein is protected under U.S. and other copyright laws. Gala technology may also be protected as trade secrets, mask works or other proprietary rights.

Gala Industries, Inc.

181 Pauley Street, Eagle Rock, VA 24085 USA • Tel: 540 884 2589; Fax: 540 884 2310;
Email: gala@gala-industries.com • www.gala-industries.com



Gala Kunststoff- und Kautschukmaschinen GmbH

Bruchweg 28-30, 46509 Xanten, Germany • Tel: +49 (0) 2801 9800; Fax: +49 (0) 2801 98010
Email: info@gala-europe.de

Gala Industries Asia Ltd.

Amata City Ind. Est., 9/34 Moo 4, T.Mabyangporn, A. Pluakdeang, Rayong 21140, Thailand
Tel: +66 38 956 245; Fax: +66 38 956 246; www.gala-industries.com