



## Market Monitoring Newsletter

ARMO'S ROTATIONAL MOLDING NEWSLETTER

lundi 28 juin 2021

### Research & Patents

#### **Investigation of tensile properties of polymeric nanocomposite samples in the rotational molding process**



Rotational molding is a plastic manufacturing process that is used to produce seamless, one-piece, and hollow parts by rotating a mold subjected to heat and then cooling it. The aim of this study is to investigate the tensile properties of produced polymeric nanocomposite samples by rotational molding. Linear low-density polyethylene was considered as the polymeric matrix, and nanoclay was added at various weight percentages of 0, 1, and 2 as reinforcement. The effects of weight percentages of nanoclay and processing conditions including rotational speed and processing temperature are investigated on the tensile properties of nanocomposite samples based on the design of experiments according to the L9 orthogonal array of Taguchi approach. Scanning electron microscopy tests were performed on the nanocomposite samples in order to study the possible agglomeration regions of the nanoclays in the polymeric matrix. The results indicate that the processing temperature is the most effective parameter on the tensile strength and Young's modulus of nanocomposite samples. Tensile strength and Young's modulus were increased by 21% and 33%, respectively, by increasing the processing temperature. Also, the rotational speed is found to be the second effective parameter on the tensile properties.

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#### **Rotomolded Vertical Farming Apparatus and System**



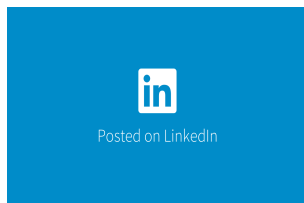
A growing system is provided that includes a rotomolded chassis that defines (i) an "interior" where plants are/may be located, and (ii) an "exterior" that at least partially defines a perimeter around the interior. The chassis generally includes stacking elements which allow one chassis to be stacked one upon the other. The disclosed growing system also generally includes (i) means for delivering liquid into the chassis, (ii) means for draining liquid from the chassis, and (iii) means for supporting plants that is conducive to their growing within the chassis.

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## Rotomolding Market News - Australia

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### **Sorocal : polyethylene water tank and water treatment solutions**



[#Sorocal](#) also sells dry toilets ! No need for water or wood pellets with such a system ! You will save money and lessen your environmental impact ! Sorocal makes its products by rotomolding polyethylene. (Translated from French)

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## Rotomolding Market News - Europe

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### **ROTOMADE : An XXL investment strategy to provide for new markets**

21/06/2021



ROTOMADE, a company based in Luxemburg, is specialized in technical parts for the industry as a whole; but also for the water recovery, water treatment, entertainment, agriculture, urban furniture and design segments. With an innovation-based strategy, Rotomade keeps adapting its industrial facilities in order to keep providing parts according to the ever evolving needs of its clients. This why Rotomade recently decided to acquire a new machine (the SAT VV 6000). (Translated from French)

Click here to read more : [www.rotomade.com](http://www.rotomade.com)

### **Chronofresh uses rotomolded insulated containers from Melform**

26/05/2021



Since 2015, Chronofresh, a subsidiary of Chronopost, has been offering express delivery of dry, fresh and frozen food products. Accessible throughout France, Chronofresh guarantees delivery to professionals and individuals in compliance with food safety regulations, including, of course,

maintaining the cold chain. Chronofresh's express organization is made up of several links to ensure compliance with the cold supply chain. For its various routes, carried out at night with non-refrigerated vehicles, the company tested several solutions to guarantee the freshness and quality of fresh products. This study led to the selection of Melform's 1,000-liter Cargo insulated container on wheels, which is manufactured using one-piece rotational molding technology with no edges, seams or welds. Certified ATP (Agreement on the Transport of Perishable Foodstuffs) and 100% recyclable, the Cargo 1,000 also offers a large loading space and its external "Europalet" dimensions (80×120 cm on the ground) optimize the filling of vehicles, while its handling is facilitated by its casters. Its thermal performance and versatility allow to keep the parcels at the right temperature thanks to eutectic plates for fresh products and dry ice plates for frozen products. The maintenance of the containers is ensured by Chronofresh and is based on the availability of spare parts supplied by Melform. In addition, each container has its own barcode. Scanned at each operation, it facilitates their follow-up and management throughout the network. Today, Chronofresh operates a fleet of 1,600 Cargo 1,000 and plans to acquire 400 more in 2021 to support its strong growth. (Translated from French)

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### **POLYTECH OBTIENT LA QUALIFICATION AIRBUS HELICOPTERS**



Airbus Helicopters vient de délivrer sa qualification à Polytech, la filiale française de Groupe Maillard Industrie, spécialisée dans la transformation des matières plastiques par rotomoulage. Nous remercions Airbus Helicopters pour sa confiance dans notre groupe

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### **POLYTECH's work gets approval from Airbus Helicopters**



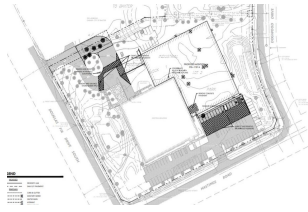
Airbus Helicopters just awarded Polytech, a subsidiary of Groupe Maillard Industrie that mastered the rotational molding process, with the appropriate certification. (Translated from French)

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## **Rotomolding Market News - North America**

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### **New manufacturer set for Baxter industrial park after council nod**



Baxter could be getting a new industrial hub and a host of jobs with the construction of a new Tri-Ven facility on the Avantech property on Hastings Road. By approving a replatting of the property during its last virtual meeting, the Baxter City Council paved the way for an addition to the Avantech property at 7790 Hastings Road including an outlot portion, as well as the addition of more than 50,000 square feet and associated development agreements to build a new facility there. The proposal, billed as a sixth step in the development of the Baxter industrial park, phase three, passed with a unanimous 5-0 vote. Tri-Ven is a rotational molding company. Avantech is a manufacturer that specializes in industrial water treatment solutions.

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