

CORPORATE PRESS RELEASE

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Protective face shields: 1,000 kits for Bergamo medics

RadiciGroup and Rimplast provide the materials and technology for injection moulding of visor frames. Project coordinators: Mille Respiri and FabLab

Injection moulding as an alternative to 3D printing for a **quicker response to health worker protection needs**: this was **RadiciGroup's objective in donating its polyamide 6 material** for the production of **3,000 frames** for protective visor face shields for medics. The frames were moulded at **Rimplast**, another Bergamo company, which immediately made available its plastic moulding technology and specialists.

The initiative was started as a follow-up to a project carried out by the young members of the *Interact Bergamo* club, who, during the last few weeks, made 300 protective visor shields in collaboration with **FabLab** (3D digital printing lab at the professional training association Patronato San Vincenzo in Bergamo). Using 3D-printing technology, the teenagers produced frames and attached them to PVC sheets to make visor face shields for extra protection (to be used **in addition to, not as a replacement for certified PPE**) for any workers who may come into contact with potential carriers of Covid-19.

FabLab Bergamo then joined the "Easy Covid-19 Mille Respiri per Bergamo e Monza Brianza" initiative for the distribution of the face shields to primary care doctors and paediatricians in the province of Bergamo. This endeavour was met with widespread approval and, in just a few days, the number of requests for the devices grew to the point that a new, faster solution was needed to meet the demand.

"We were already working with some companies in the Bergamo area on projects for the supply of materials, 3D printing of respirator valves and 3D printing of visor frames," said **Nicolangelo Peduto, research and development manager of RadiciGroup High Performance Polymers**. "After the initial positive response from the doctors who had already started using the first 3D-printed visor shields, FabLab contacted us and asked if we were willing to offer our engineering polymers (Radilon[®] S) for injection moulding of the

frames. At that point, we started collaborating with Rimplast, which had also decided to get involved and join the solidarity network. In a matter of a few days, we delivered the necessary materials, performed trial runs and produced three thousand pieces. It gives us great satisfaction to be able to make our contribution to the healthcare system, especially in the communities where our production sites are located."

The boys and girls of **FabLab** made a thousand kits, each containing three frames, six PVC visors and an instruction sheet. The members of "**Easy Covid-19 Mille Respiri per Bergamo e Monza Brianza**" took charge of delivering the visor face shield kits to the Bergamo ATS [Health Protection Agency], which then distributed the kits to primary care doctors and paediatricians in the Bergamo province.

RadiciGroup materials for 3D printing

For weeks now, RadiciGroup has made its polymer know-how available for the 3D printing of parts to be used in medical applications. 3D printing is a technology characterized by its ability to provide a fast response to contingent needs, such as the current requirements of the healthcare system. Collaboration networks, which have been created quickly during these times, have made it possible to meet community needs. A valuable contribution has also come from TreedFilaments, which, throughout these past weeks, has supplied numerous device makers with its monofilament, the material needed for 3D printing. The first challenge taken up by RadiciGroup was the printing of Charlotte & Dave valves for the rapid conversion of snorkelling masks to oxygen masks for the treatment of Covid-19 patients. Then the Group moved on to the printing of protective visor frames – both simple (FabLab) and more complex (Asmtech) versions, for which RADILON® CS was used.

RadiciGroup is now experimenting with RADILON[®] CS and RADILON[®] D (bio-based products) to be used for the printing of masks that are durable, sanitizable and thus reusable, the only requirement being the addition of a single-use nonwoven filter.

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