

Trexel GmbH

MuCell - Microcellular foam technology for injection moulding

About this organisation

Machine translation

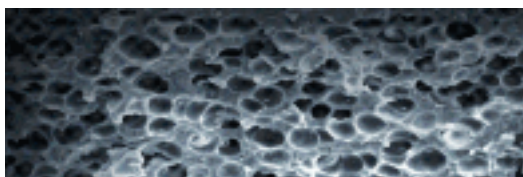
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Trexel is the sole developer of MuCell® microcellular foaming technology and supplies MuCell® systems for foam injection moulding production. Trexel offers engineering support, including training and education activities. On request, projects are supervised from the selection of suitable components, planning and realisation of sampling through to the start of series production. MuCell® support centres are located in the USA, Germany and Asia.

The MuCell® foam injection moulding process for thermoplastics offers unique design flexibility and cost-saving potential compared to conventional injection moulding. The process makes it possible to produce the plastic part with a wall thickness that accommodates the functionality of the components and does not have to be subject to the design requirements of the conventional injection moulding process. The combination of reducing the material density and designing for functionality often results in weight savings of over 20%. The replacement of holding pressure by cell growth results in the production of low-stress moulded parts. Dimensional manufacturing tolerances and warpage are reduced and sink marks are also eliminated.

- Lower costs (less material consumption; faster cycle time)
- Freedom of design (design for function, not for process) -
- Faster to market (fewer mould adaptations) - Sustainable

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North Rhine-Westphalia
Germany
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Organisation type

Small or medium-sized enterprise

Sectors



Employees

10 up to 49

Turnover

n/a

Funding

n/a

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Main areas covered Automotive interior parts, Under the hood applications, functional black parts, Lightweight injection moulded parts

Infrastructure MuCell injection moulding technology centre, MuCell Engineering Network, Process support & service

Certifications

Keywords Foam injection moulding, TSG, Physical foaming, Component design - component optimisation

Memberships

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Machines and plants, Tools and moulds	✓	✓	✓
Services & consulting Training, Consulting, Testing and trials, Engineering, Prototyping, Simulation, Technology transfer, Maintenance and repair		✓	✓

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Lightweight material construction	✓	✓	✓
Functional integration Media conductivity, Others: null		✓	✓
<i>Measuring and testing technology</i>			
Modelling and simulation Loads & stress, Processes, Structural mechanics, Materials		✓	
<i>Plant construction & factory automation</i>			
<i>Recycling technologies</i>			
Manufacturing process			
<i>Additive manufacturing</i>			
<i>Coating (surface engineering)</i>			
<i>Fibre composite technology</i>			
<i>Forming</i>			
<i>Joining</i>			
<i>Material property alteration</i>			
Primary forming Injection moulding	✓	✓	✓
<i>Processing and separating</i>			
<i>Textile technology</i>			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
Cellular materials (foam materials) Others: null		✓	✓
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Natural fibre reinforced plastics (NFRP)		✓	✓
<i>Fibres</i>			
<i>Functional materials</i>			
<i>Metals</i>			
Plastics Thermoplastics		✓	✓
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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