CONVERSION CAPABILITIES

TROCELLEN® is using a large variety of conversion capabilities to add value to its foam product portfolio. Within the TROCELLEN® Group we build up key locations for the different kind of applications. These include various lamination processes involving other foams, films, textiles or cover stocks; adhesive coatings, flame lamination, die cutting, compression moulding, perforation and embossing a.o.. The combination of in-depth knowledge of foam production and conversion means that TROCELLEN® is well placed to work in partnership with its customers in translating concepts and ideas into performance pricebalanced solutions.



ASSIC

TROCELLEN CLASSIC

TROCELLEN® classic, our core product line, consists of horizontally foamed XLPO material manufactured in rolls or sheets. Since 1972 these foams are regarded as an industry standard based on their proven application performance. Within this product line we produce two foam variations that differ in cross-linking technique:

Chemically crosslinked foams (C-foams) are characterized by their very abrasion resistant surface and excellent thermomouldability, which makes them suitable for very technical applications.

Physically crosslinked foams (P-foams). Due to the physical cross-linking process our p-foams show very specific properties, differing from c-foams especially in surface and cell structure, but also in other values like thermal properties, tensile strength, compression set, shrinkage or fogging values. TROCELLEN® classic rolls and sheets are typically offered in densities between 25kg/m³ and 250kg/m³. The thickness varied between 2mm and 18mm. We developed a wide range of foam modifications which can be characterized by certain specific properties, e.g.: Fire resistance, Temperature resistance, Softness, Hardness (Rigidity).



TROCELLEN VERTICAL

These physically cross-linked polyolefin foams offer massive potential for a wide range of applications, where very thin foams with a smooth surface and a fine cell structure are required. TROCELLEN® vertical is produced in thicknesses between 0,5 and 6 mm and in densities varying from

25 to 180kg/m3. Crosslinking by irradiation and vertical foaming technology also permits the incorporation of polypropylene (PP) as a base resin for foam production. Foams manufactured from PP show a higher

BLOC

TROCELLEN BLOC

temperature resistance.

Our product line TROCELLEN® bloc offers chemically cross-linked blockfoams manufactured by using a discontinuous foaming process. These foams can be produced in higher thicknesses and show a very smooth cell structure after removing the skin.

TROCELLEN® bloc is manufactured in densities of 25, 30, 45 and 100kg/m3. Low densities are originally produced in 100mm thickness, while our high density foam is produced in 40mm thickness. All products can be splitted to obtain thin layers, starting from 5mm upwards.

Welcome to our World of Foam, we invite you to take a closer look ...

France

Romania

YO11 1 TP

Headquarters

TROCELLEN GmbH Deutschland Mülheimer Straße 26 53840 Troisdorf Germany Phone: ++49 (0) 2241 85 04 Fax: ++49 (0) 2241 85 37 53

TROCELLEN Italia S.p.A.

Via dei Dossi 7/9 S.S. 525 del Brembo 24040 Osio Sopra (BG) Italy Phone: ++39 035 50 70 11 Fax: ++39 035 50 21 74

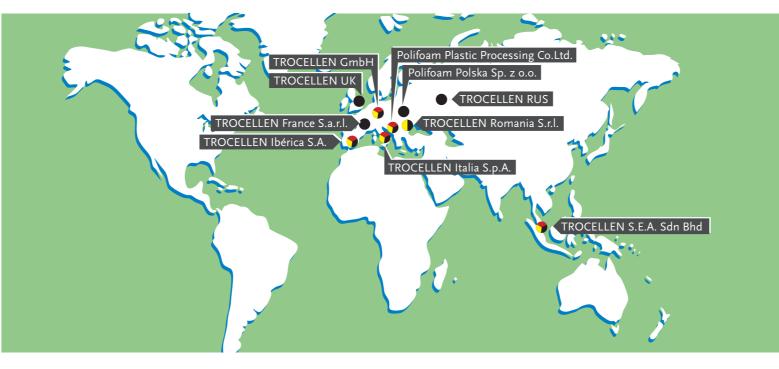
TROCELLEN S.E.A. Sdn Bhd Malaysia

118, Jalan Semangat 46300 Petaling Jaya Selangor Darul Ehsan Malaysia Phone: ++60 3 79 56 33 66 Fax: ++60 3 79 55 37 77

Polifoam Plastic Processing Co. Ltd. Hungary

Táblás u. 32 1097 Budapest Hungary Phone: ++36 13 47 98 00 Fax: ++36 12 80 67 08

World's leading supplier of crosslinked polyolefin foams



Sales Office

foaminfunction

TROCELLEN France S.a.r.l. 2. Allée de la Fresnerie 78330 Fontenay le Fleury

Phone: ++33 (0) 130 85 93 40 Fax: ++33 (0) 130 85 93 44

TROCELLEN Romania S.r.l. Cisoda, Com. Giroc. DN 59 KM 8 + 550 Stanga 1900 Timisoara

Phone: ++40 256 30 63 77 Fax: ++40 256 30 63 76/78

TROCELLEN GmbH UK Office Central Chambers, 77 Westborough Scarborough, North Yorkshire

United Kingdom Phone: ++44 (0) 1723 376 111 Fax: ++44 (0) 1723 376 444

TROCELLEN Ibérica S.A. C/Avila, s/n 28804 Alcalá de Henares Spain Phone: ++34 91 885 55 00 Fax: ++34 91 885 55 01

TROCELLEN Rus 141402 Moskovskaja oblast Himki-2, post box 186 Russian Federation Phone: ++7 495 739 44 38

Fax: ++7 495 739 44 21

Polifoam Plastic Polska Sp. z o.o. ul. Zgierska 40 95070 Aleksandrów Lódzki Poland Phone: ++48 42 712 12 96 Fax: ++48 42 712 12 89



AUTOMOTIVE.

ROCELLEN

... the foam company

Foam Production – Converting



... the foam company

www.trocellen.com | info@trocellen.com

THE FOAM COMPANY

TROCELLEN® is Europe's leading supplier of cross-linked foams. And since December 2005 the company has been heading for global success together with its Japanese shareholders, Furukawa Electric Co. Ltd. and Otsuka Chemical Co. Ltd.

With more than 600 employees at ten sites we offer solutions for a wide variety of industries and applications. Via our Automotive, Construction, Insulation, Adhesive Tape, Sport & Shoe, and General Conversion & Packaging units, we meet industryspecific requirements, as well as providing inspiration with a continuous stream of new developments, so that our foams are always optimized to perform their predefined function, or put simply: foam in function.

That's what we commit to. Every day. Creative. Energetic. Because we live foam.

TROCELLEN ... the foam company.

... the foam company

BUSINESS UNIT AUTOMOTIVE

that is dedicated to servicing the technical needs of automoness unit automotive integrates all services and expertise structures which might be used in the future for interior trim. to meet the high level demand that the Automotive industry requires today.

equipment for special testing and facilities to carry out different converting trials such as thermomoulding or special laminations. low TROCELLEN[®] in this environment to explore new concepts in all future vehicles.

and to find optimal and innovative solutions. Together with their customers, TROCELLEN[®] have been continuously focussing its The business unit automotive has a multidisciplinary team R&D activities to meet the increasing demand for recyclable and light weight solutions, with immediate potential implementation tive customers and exploring innovating concepts. This busi- in light weight airducts, Headliner construction or other sandwich

The central laboratory within the TROCELLEN® Group the busi-The business unit automotive brings under one roof trained staff, ness unit automotive is constantly working on new products and formulations adapting foams to changing market requirements. TROCELLEN® has always considered the importance of maximi-This intensive R&D activities and application development al- zing recyclability, and providing guidance in designing for recycling

Coordination of research & teaching Market R&D / benchmarking / sales & marketing Leader in innovation Leader in creative thinking Multidisciplinary expertise in all manufacturing processes

> Environment recycling Development of tailor made solutions Development & production of high quality materials

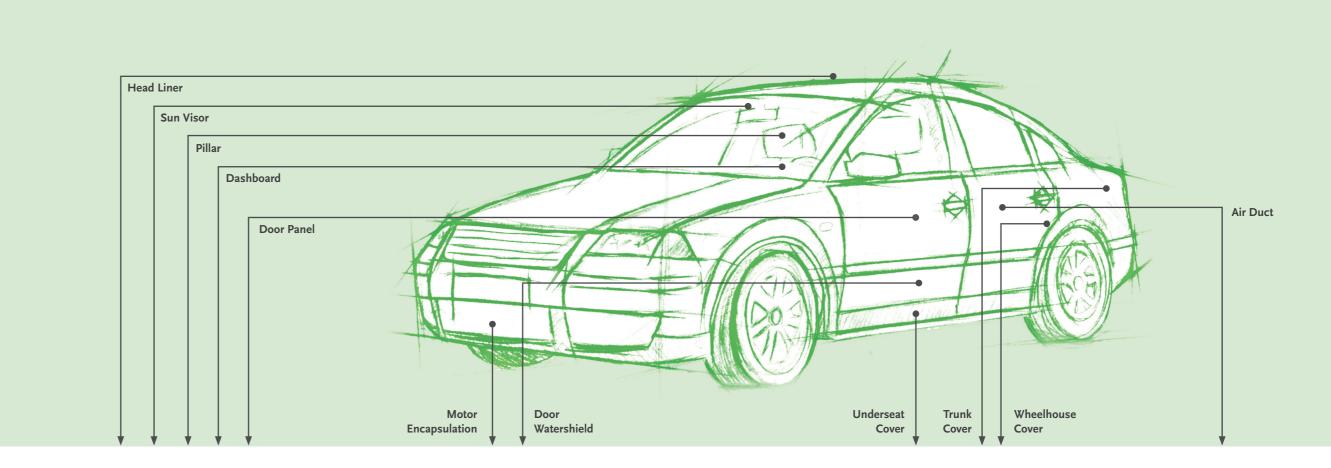


Multilingual access to information Customer manager teams (key accounts) Focal point for interchange of information / know-how Project management, Technical support

Knowledge Management

Add value to existing products Supply solutions not just products

Partnership with university / research centers / R&D programms



INTERIOR SOFT TRIM

The fastest growing segment for XLPO foams in the automotive and transportation sector involve soft trim applications. TROCELLEN® foam in combination with TPO, PVC, leather or textiles can be used in application areas such as dashboards, pillars, consoles, headliners, door panels, sun visors and other soft trim components.

Our Polyolefin foam laminates can easily be used in converting processes such as low pressure injection moulding, vacuum forming or compression moulding.



ACOUSTIC APPLICATIONS

- While TROCELLEN® foams are closed-cell and technically reflective, they are frequently used in acoustic applications like
- Encapsulating covers for motors or mechanical devices
- Thermomouldable substrates for laminations, e.g. with PUR foams, fibres, non-wovens, aluminium, etc.
- Traditional "watershields"
- The crosslinked foam component of engineered laminates provides the 3D shape, acting as a decoupler, as well as a moisture, dust and air infiltration barrier.

FUNCTIONAL AND DECORATIVE PARTS

Parts made from TROCELLEN® foams are light-weight and easy to install within a vehicle. TROCELLEN® foams can be used for all kinds of decorative parts within a car:

- Decorative covers for trunks or boot liners
- Soft Interior Components
- Underseat covers for front and rear seats
- HVAC components for thermal insulation

For these types of applications it is common to use pure TROCELLEN® foam or engineered combinations with other materials such as solid plastics, leather or other cover stocks.

AIR DUCT

TROCELLEN® pioneered and patented the "Twin Sheet Technology" for Air Ducts and hollow chamber structures.

Value delivered:

- Air-noise reduction
- Thermal Insulation
- Flexibility/Easy assembly
- Light-Weight
- Low cost tooling

