

Fastening Technology Focus.
Composite and Foam Materials.



EJOT[®]

The Quality Connection

A photograph of an astronaut in a white spacesuit sitting on a lunar rover on the moon's surface. The rover has large, treaded tires and is positioned on a grey, cratered landscape under a dark sky with stars. The text "Build lighter, build stronger." is overlaid in white on the right side of the image.

**Build lighter,
build stronger.**

EJOT® Advanced Fastening Systems

Since the Apollo missions made a giant leap for mankind, the quest to build lighter vehicles with greater structural resilience has pre-occupied generations of automotive engineers. Advancements in every aspect of vehicle design from simulation software, aerodynamics, insulating foams through to the use of lightweight alloys and composite materials can be traced back to the original space age.

Today, the technology to build lighter, stronger cars has moved at a pace and EJOT's ability to provide innovative fastening solutions for advanced engineering materials has made us a market leader. Beyond the product range, we provide system performance solutions that maximise time and investment:

- **Design engineering support and on-site advice**
- **World-wide availability, just in time delivery**
- **Process reliable assembly and high degrees of purity**
- **0 ppm target and highest possible quality**

EJOT®

The Quality Connection
www.ejot.co.uk

Welcome to EJOT

OUR STRENGTH IS OUR TEAM

EJOT's track record is one of consistent high quality, responsive and reactive technical support - and a creative vision for product development.

For industrial and engineering sectors, EJOT's ability to create either one sided assembly or part-reduced solutions means our products are constantly capable of delivering significant 'bottom line' savings. This way, cost reduction does not mean lowering of quality, as EJOT's products mean significantly higher performance.

These properties provide the basis for a quality connection, regardless of the application.

EJOT's current product portfolio includes high quality fixings for thin sheet through to cast metals, alloys and thermoplastics.

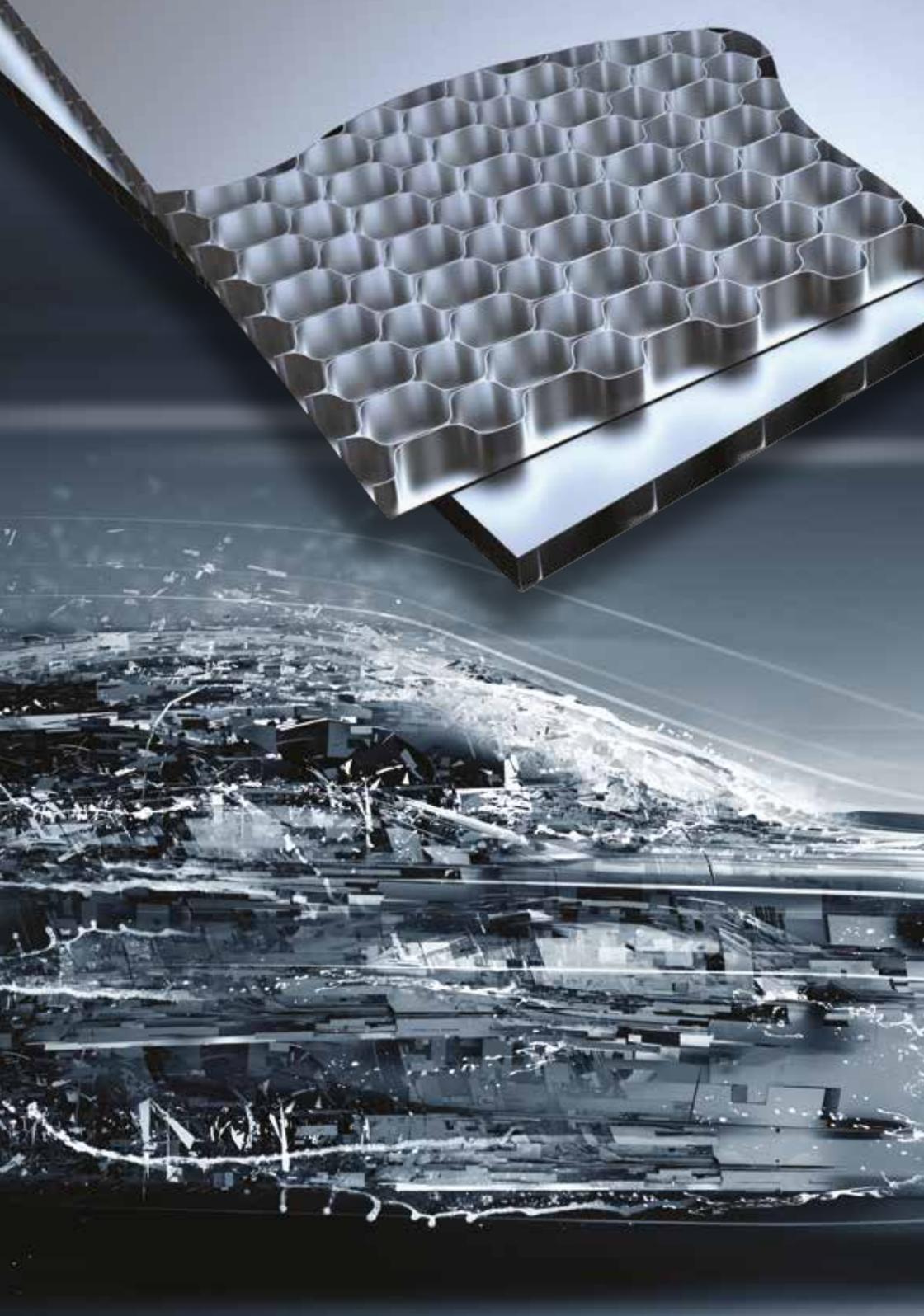


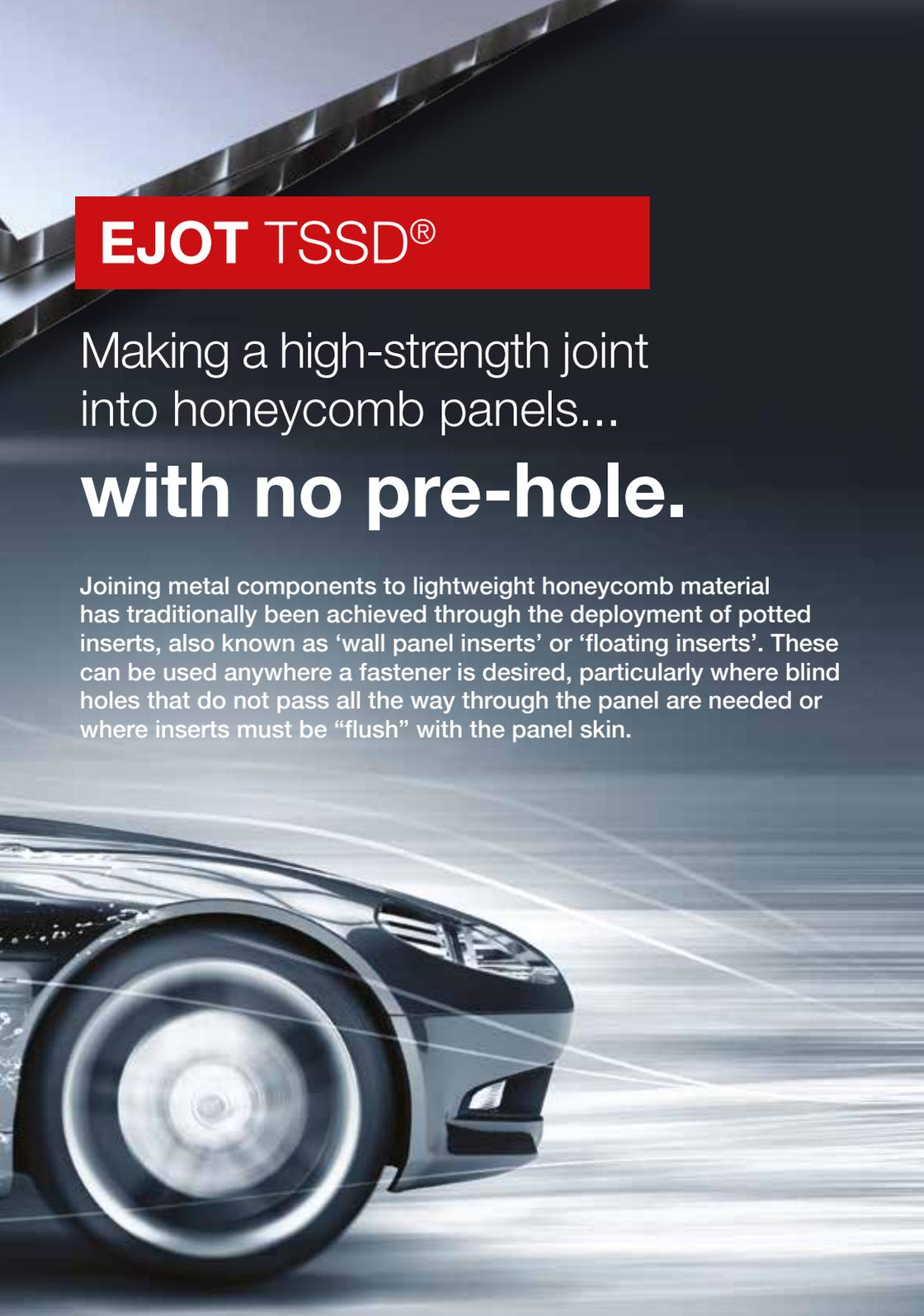
EJOT PRODUCTION READY INNOVATION

Production-ready means systems that are being utilised in assemblies worldwide today.

EJOT® leads global fastening technology providing support and solutions for low through to high volume manufacturing. Our Application Engineers will work with you from the conceptual stages, throughout development and into production.







EJOT TSSD®

Making a high-strength joint
into honeycomb panels...

with no pre-hole.

Joining metal components to lightweight honeycomb material has traditionally been achieved through the deployment of potted inserts, also known as 'wall panel inserts' or 'floating inserts'. These can be used anywhere a fastener is desired, particularly where blind holes that do not pass all the way through the panel are needed or where inserts must be "flush" with the panel skin.

EJOT TSSD®



EJOT® has now developed a product range that not only creates an incredibly strong joint but also eliminates the need for any pre-hole; a much faster assembly process. Even better news for prospective customers is that the system is production-ready and fit for purpose!

Developed at EJOT's global laboratories in Bad Berleburg, Germany, TSSD® (Thermischer Stoff-Schluss-Dom / thermal adhesive bonding boss) uses technology derived from the company's fixing process for EPP foams.

Using much the same process, TSSD® now enables the highly efficient fixing of a vast range of honeycomb materials and panel thicknesses. Typical assembly applications include cockpits and consoles, lighting and instrument panels, assistance controls, entertainment systems and auto HVAC. Yet the potential goes way beyond the roof panels, fascias, doors and gloveboxes of commercial vehicles and is equally viable for the specialised assembly of insulated vehicles, emergency vehicles, caravans and mobile homes.



Application



Paper honeycomb + PUR GF top layer.
Pull-out force 900 N



Aramid honeycomb + Aramid fibre top layer.
Pull-out force 700-1.200 N



PP honeycomb + PP GF top layer.
Pull-out force 800 N



PUR foam + 0.6mm aluminium AW3003.
Pull-out force 900 N



EPP foam + PP GF top layer.
Pull-out force 500-900 N



PP GF foam + PP GF top layer.
Pull-out force 1,900 N



Rohacell foam + CRP top layer.
Pull-out force 1,300-1,700 N



XPS foam + PS GF top layer.
Pull-out force 500 N





EJOT EPPsys®

Secure fastening solutions
for foamed components

Lightweight design concepts that utilise EPP components (expanded polypropylene) require new fastening solutions.

EJOT® EPPsys® is a product group designed to do exactly that, guaranteeing reliable fastening of components. The EPPsys product range has been developed, tested and is production-ready for numerous applications.

EJOT EPPsys®

EJOT® EPPsys® RSD

The EJOT® EPPsys® RSD friction-welding boss is a highly effective fastening element for EPP foams and PP honeycomb elements.

Through a calculated friction welding process the EPPsys® RSD is embedded in the EPP foam and makes a secure connection to the molten material.



Advantages and Benefits

- Special system for EPP foams and honeycomb elements
- Suitable for almost all EPP foam sizes
- High torques
- High transmittable tensile forces
- No pilot hole in the foam necessary
- Easy assembly after the foam expansion
- Assembly independent of any component tolerances
- Clean assembly
- Weight savings

EJOT® EPPsys® Delta Tubus

The EJOT® DELTA Tubus is a high-performance fastening element for foamed materials, particularly suitable for EPP foams.

The DELTA Tubus is inserted into the tool before the foaming process and subsequently set in place. After this, the component to be joined can be fastened using an EJOT DELTA PT® screw.



Advantages and Benefits

- Easy realisation of an attachment point in foamed components
- Suitable for various foamed materials
- Very accurate positioning
- Suitable for foam densities upwards of 30g/l
- High transmittable torque levels
- Process reliable assembly with an EJOT DELTA PT® screw
- Weight savings

EJOT® EPPsys® D

The EPPsys® D direct assembly screw is a fastening element, which can be directly screwed into the foam, without the need for a pilot hole.



Advantages and Benefits

- Special EJOT thread for EPP foams
- No need for a pilot hole, means no hole overlap problems
- High process reliability due to large margin between installation and stripping torque
- High axial load capacity when fastened
- Weight savings due to the used plastic material
- Manual, semi-automatic and fully automatic assembly possible

EJOT® EPPsys® DR

The EPPsys® DR direct assembly 'snap-to' component combines the advantages of the EPPsys® D with an alternative for subsequent component attachment. Two engagement hooks allows an easy attachment of thin-walled components.



Advantages and Benefits

- All assembly features of the EPPsys® D screw are valid
- Easy, subsequent attachment of EPP components to thin-walled components
- Easy and secure snap-to of the mounted parts
- Large clamping thickness range
- Axial tolerance compensation within the clamping thickness range
- Radial tolerance compensation

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