



Joining technology

Fast and process reliable bonding of fasteners

Designs

Plastic-metal versions

ONSERT® studs



ONSERT® inserts



Plastic versions

ONSERT® cable management



ONSERT® specials



Materials

Plastic moulding

■ PA PACM 12

■ PA PACM 12

Metal part*

■ Steel with zinc-nickel coating, sizes M5 and M6

■ Alloy A286 (passivated, 0.1900-32)

■ Alloy EN AW-6061-T6 with X5CrNi18-10HC (1.4301, 0.1900-32)

Plastic

■ PA PACM 12

Bottom part

■ PA PACM 12

Upper part*

■ PEI

■ PA

■ PA PACM 12

Manual bonding process



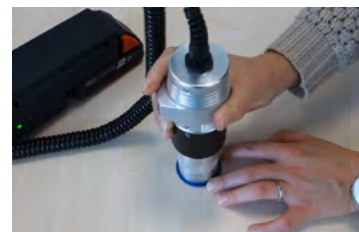
Application of the adhesive to the ONSERT® fastener



Insertion of the ONSERT® fastener into the tool holder



Placing the tool on the substrate



Tool removal and assembly

Adhesive

- One-component acrylate (modified)
- Compliant with RoHS Directive 2017/2102/EU
- Fast curing — full strength within seconds
- Compliant with FAR 25 and ANSI/UL 94

Advantages

- Fast curing and immediate strength
- No visual impact on sensitive surfaces
- Applicable if thermal processes cannot be used
- One-component adhesive — no mixing of adhesives
- Manual and automated processing systems available

Limitations

- Permanent ambient temperature < 90 °C
- For metals: AL, steel after e-coating or painting
- For plastics: epoxy-based composites, PC, PA
- For glass: with or without paint

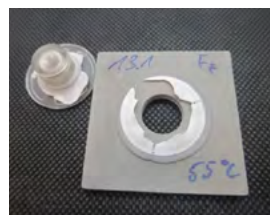
* Others on request

Parameters

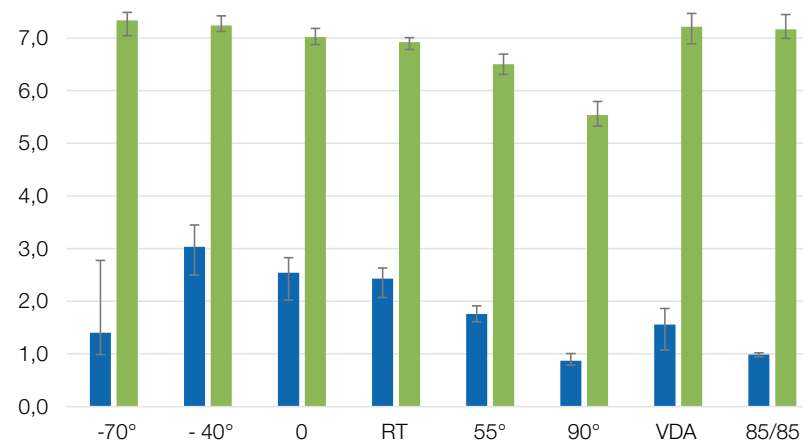
Product type	ONSERT® insert
Item code	4840 623 1008
Plastic moulding	PA PACM 12
Metal part	aluminium/stainless steel
Surface	–
Adhesive	4839 100 4150
Amount	0.2 g
Tooling	Portable Mini, 5 sec., 90%
Substrate	aluminium
Surface	sanded
Thickness	4 mm



Typical type of failure



Pull-off and shear performance [kN]



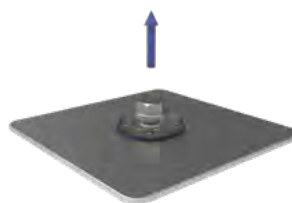
Properties to be confirmed under customer specific conditions

Further characteristics*

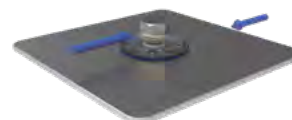
Salt spray tests	–
Static load	–
Torque out:	>10 Nm

- Fluid susceptibility acc. DO 160 G Sec 11.4 (materials)
- Flammability in acc. FAR 25-60 sec. vert. (materials)
- Locking torque values according to NASM 8846 and EN ISO 2320
- Testload values according to NASM 25027

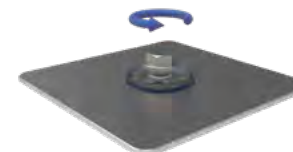
Load case



Pull-off



Shear



Torque test



Permanent load

* Not all characteristics apply to all combinations available