



## Joining technology

## Fast and process reliable bonding of fasteners

## 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

## Designs

### Plastic-metal versions

### Plastic versions

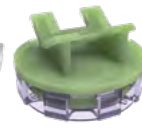
#### ONSERT® studs

#### ONSERT® inserts



#### 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



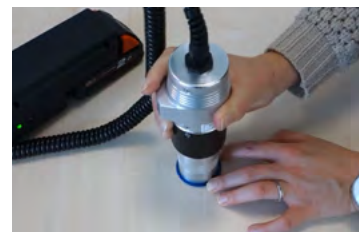
Application of the adhesive to the ONSERT® fastener



Insertion of the ONSERT® fastener into the tool holder



Placing the tool on the substrate



Tool removal and assembly

## 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

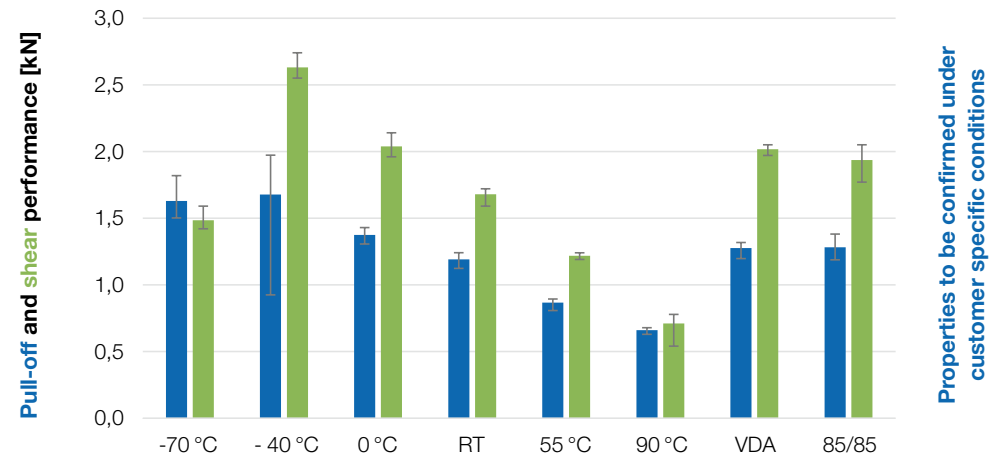
\* Others on request

**Parameters**

<b>Product type</b>	ONSERT® cable holder
<b>Item code</b>	4840 910 0002
<b>Plastic moulding</b>	PA PACM 12
<b>Metal part</b>	–
<b>Surface</b>	–
<b>Adhesive</b>	4839 100 4150
<b>Amount</b>	0.25 g
<b>Tooling</b>	Portable Mini, 8 sec., 90%
<b>Substrate</b>	aluminium
<b>Surface</b>	sanded
<b>Thickness</b>	4 mm

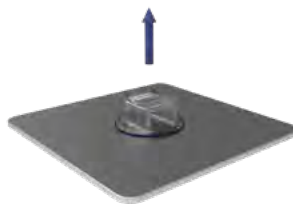


Typical type of failure

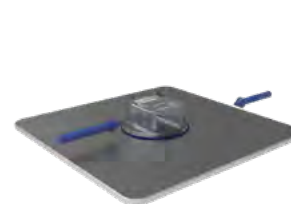
**Further characteristics\***

<b>Salt spray tests</b>	–
<b>Static load</b>	–
<b>Torque out:</b>	–

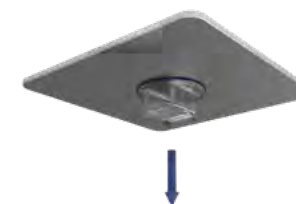
- Dynamic test acc. to RTCA-DO 160F Ch. 8
- Dynamic test acc. to RTCA-DO 160F Ch. 7
- Nose wheel imbalance tests acc. to ABD 0100.1.2
- Fluid susceptibility acc. to DO 160 G Sec. 11.4 (materials)
- Flammability in acc. FAR 25-60 sec. vert. (materials)

**Load case**

Pull-off



Shear



Permanent load

\* Not all characteristics apply to all combinations available