Solvent Bonding

with BIOVOX MedEco Bioplastics

Solvent bonding, also known as cold welding or swelling, is a proven technique for joining thermoplastics. Unlike thermal welding processes, solvent bonding does not require an additional heat source but uses solvents to cross-link the polymer chains of the plastics to be bonded. This solvent evaporates during the process and, unlike conventional bonding processes, no adhesive layer is left behind. This method is widely used in medical technology, the packaging industry and the production of technical parts. Our BIOVOX **MedEco bioplastics** ICB, ICB C1, IGH, XCB and XGB can also be bonded with solvents and other thermoplastics.

The following solvents may be used:

MedEco	Solvent
… and PVC	Dichloromethane (methylen chloride) Tetrahydrofuran (THF)
… and ABS	Dichloromethane (methylen chloride) Methyl ethyl ketone (MEK)
… and PMMA	Dichloromethane (methylen chloride) chloroform
… and PC	Dichloromethane (methylen chloride) Chloroform
… and PET-G	Dichloromethane (methylen chloride) Methyl ethyl ketone (MEK)
… and PSU	Dichloromethane (methylen chloride)

>> Page 2: Deepdive & Contacts

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BIOVOX

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How it works:

Solvent bonding involves wetting the surface of the thermoplastics with a solvent (1).

This solvent separates the polymer chains from each other, forming a plastic intermediate layer (2).

Subsequently, the surfaces are combined under pressure so that the dissolved polymer chains become entangled (3).

After evaporation (4) of the solvent, a solid, homogeneous compound remains (5).

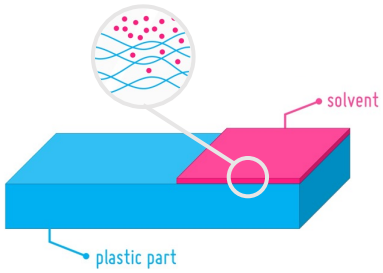
„This process enables a strong, durable connection that can withstand high mechanical stresses.

Are you interested in this method? Don‘t hesitate to contact me!"

Ingo Mohr
BIOVOX Plastic Expert
& Customer Success Manager

Send an E-Mail to be-green@biovox.systems or click >>here to book a meeting directly into Ingos calendar!

1.



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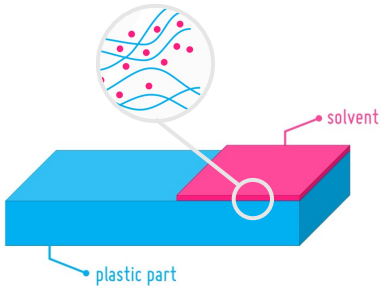

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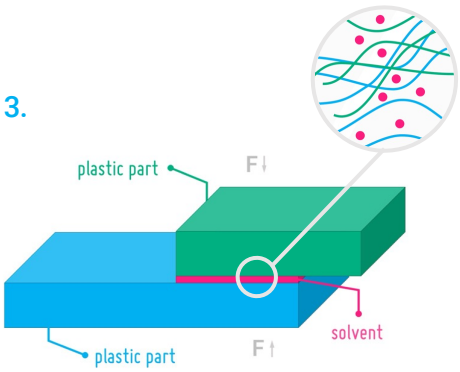

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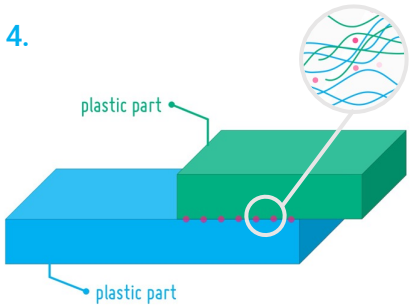

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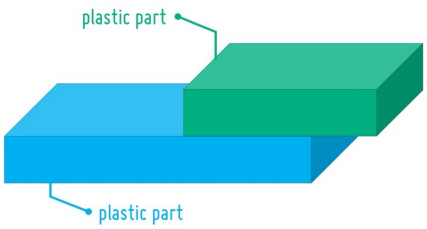

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