## Processing instructions for cast-on Abutments for non precious metal or precious metal alloys



Manufacturer's name:	SIC invent AG			
Product(s):	SIC universal abutment "Flex Star" (cast-on) and SIC crown base (cast-on), which are intended for further processing using precious or non-precious metal alloys.			
Note:	Products marked with "NEM" are based on a platinum-iridium alloy (PtIr) and can be cast on to <b>non-precious metal</b> alloys. The plastic section ( <b>black</b> ) of the casting/ wax-up aid burns out without residue.			
	Products marked with "HSL" are based on a gold platinum alloy (AuPt) and can only be cast on to <b>precious metal</b> alloys. The plastic section ( <b>white</b> ) casting/ wax-up aid burns out without residue.			

## **Processing instructions:**

Attach the sprues according to the alloy manufacturer's instructions. Ensure that the alloy reaches the abutment base by the shortest path so that there is sufficient thermal energy for optimal casting on. The joining section of the wax pattern should be over contoured by approx. 0.5 mm (cervical wax) to guarantee perfect casting on. If a degreasing agent is to be used, ensure that only the wax pattern is coated with the agent. Degreasing agent should never be applied to the exposed sections of the abutment base, as there is the risk that metal will flow onto these surfaces during casting and negatively affect the casting result.

Care should be taken to ensure that porcelain does not bond onto the platinum-iridium or gold platinum alloy. Surfaces to be veneered with porcelain require a cast-on base surface.

Mix the required amount of investment. Invest the pattern in the usual way and take particular care to ensure (e.g. by using a probe) bubble-free investing of the screw seat and screw channel. Careful investing with subsequent check/adjustment of the screw seat and screw channel is critical in determining the quality of the screw connection. It is important to take great care when investing.

To produce an accurate casting to the abutment base (HSL or NEM), the temperature of the casting ring should be approx. 50℃ over the recommended preheating temper ature of the manufactor's instruction. The heat soak on the final temperature to the casting ring should be for a minimum of 45 minutes.

An expedient procedure during casting minimise temperature loss. Please adhere to the further heating times after the casting metal has been fully melted according to the manufacturer's instructions in general.

During devesting ensure that, if possible, the investment in the area of the abutment base is only removed using an ultrasonic cleaner. If sandblasting in the area of the abutment base is unavoidable, use only microblast beads and reduce the blasting pressure to max. 2 bar.

Alloy data:	Ptlr (for non precious metal / NEM)		AuPt (for precious metal / HSL):		
	Colour	white	Colour	white	
	Melting range (℃)	1830- 1850℃	Melting range (℃)	1360-1460℃	
	225		Vickers hardness HV tempered 250		
		55	0.2% Proof stress (daN/mm2) tempered 78  Tensile strength (daN/mm2) tempered 82  Elongation at rupture (%) tempered 15		
		72			
		18			
		700℃, 30 min.	Tempering	0-700℃ , 30 min.	
	allow to cool slowly allow to cool slow				
Compo-					
sition:	Pt: 80%		Au: 61%		
	Ir: 20%		Pt: 23,8%		
			Pd: 15%		
			Rh: 0,2%		
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