

Metafil Bulk Fill

Resin-based Dental Restorative Material



Direct restoration



Cavity preparation



Apply bonding agent



Filling with Metafil Bulk Fill



Polish and finish

Indirect restoration



After cavity preparation,
apply bonding agent



Cores were built up
with Metafil Bulk Fill







Preparation for
ceramic restorations



Restored with
ceramic inlays

Viscosity and available shade

Metafil Bulk Fill	
Low-Flow Universal	Low-Flow A2
	
	

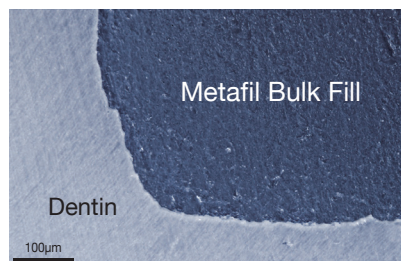
*Flows: 60 sec after materials dispensed on the vertical glass wall.

"Low polymerization shrinkage" lead to less risks after restorations.

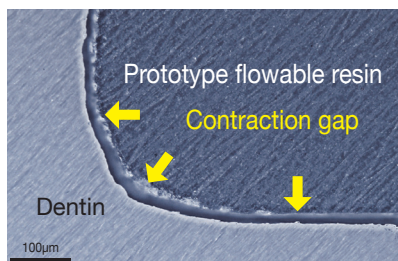
Low polymerization shrinkage

Metafil Bulk Fill have achieved a low polymerization shrinkage rate of less than 3% with newly developed LPS monomer(*).

● Comparison of cavity compatibility with or without LPS monomer.



Metafil Bulk Fill
(with LPS monomer)
Tightly sealed



Prototype flowable resin
(without LPS monomer)
Gap formed due to
polymerization shrinkage

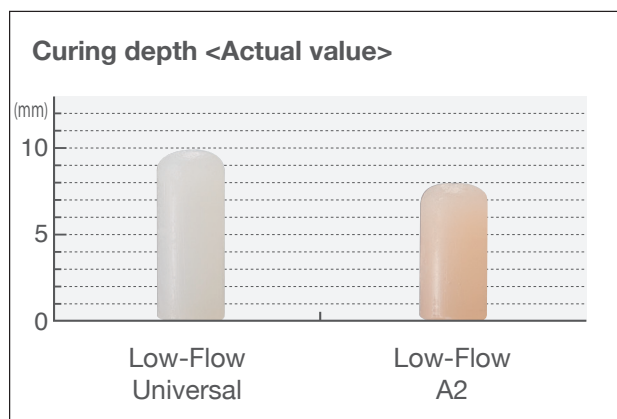
● LPS monomer :
Low polymerization shrinkage monomer

Polymerization shrinkage for each monomer	
Monomer	Polymerization shrinkage (%)
LPS monomer	2.0
Bis-GMA	4.5
UDMA	7.0

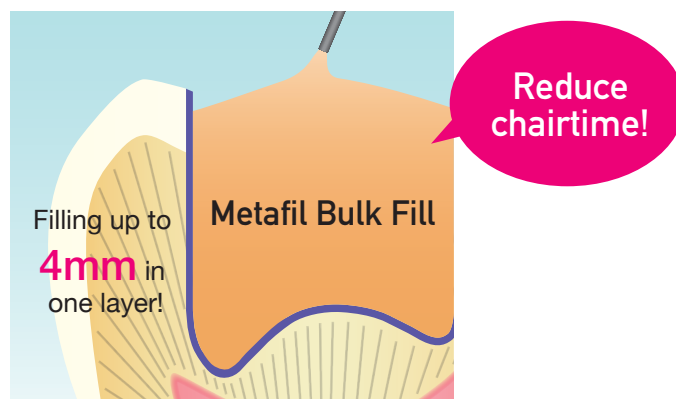
*LPS monomer: LPS stands for "Low Polymerization Shrinkage". LPS monomer, newly developed by Mitsui Chemical Inc., provides an excellent lower shrinkage rate than other monomers in the market.

Place up to 4mm with a single layer

Even for a deep cavity, it can be placed up to 4 mm with a single layer due to the high polymerization performance.



*Based on ISO 4049 : 2009 standard, curing depth is one half of actual value.

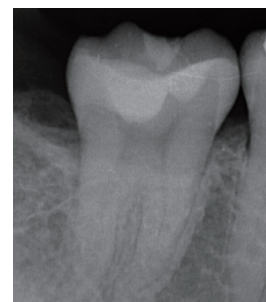


Performance

	Metafil Bulk Fill		In-house Flowable CR	Test method
	Low-Flow Universal	Low-Flow A2		
Polymerization shrinkage (%)	2.8	2.8	4.3	In-house method*
Flexural strength (MPa)	145	145	115	ISO 4049 : 2009
Curing depth (mm)	4.9	4.0	2.0	
X-ray contrast (%)	200	200	200	
Wear resistance (mm ³)	1.1	1.1	0.8	Leinfelder method

*The densities of uncured and 24 hour post-cured restorative materials were determined by Helium Pycnometer.

Radiopaque



After application of
Metafil Bulk Fill