

CLEARFIL MAJESTY™ Posterior

CLEARFIL MAJESTY™ Posterior is a light-curing, nano-superfilled, radiopaque restorative posterior composite resin composed of nano and micro inorganic fillers treated with a proprietary new surface coating technology. The new surface technology permits a larger quantity of nanofiller to be dispersed in the resin matrix.



Preoperative view of the defective inlay restoration on the mandibular first molar



Filling with CLEARFIL MAJESTY™ Posterior A3.5. The layer can be divided into increments according to cavity depth.



Final view of the restoration

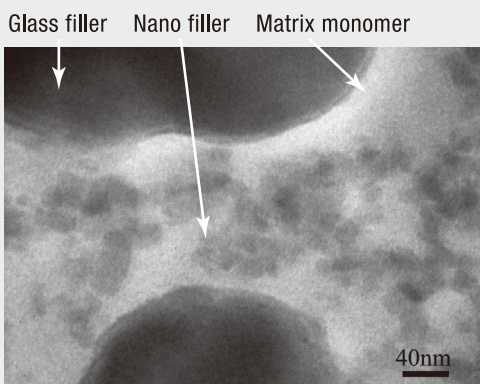
By courtesy of NOBORU TAKAHASHI, DDS
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NANO DISPERSION TECHNOLOGY

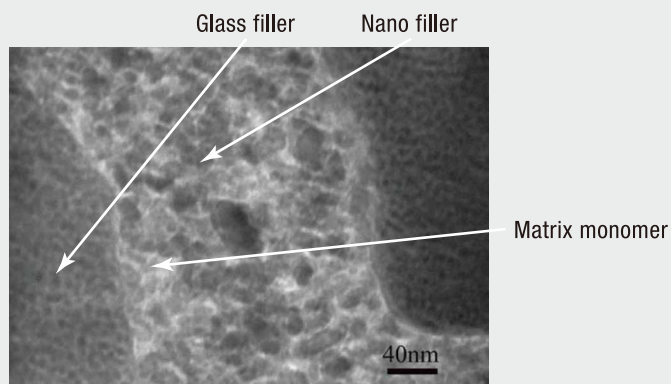
SUPERIOR PHYSICAL PROPERTIES

- High mechanical strength
- Low polymerization shrinkage
- Low thermal expansion coefficient

NANO DISPERSION TECHNOLOGY



Conventional hybrid composite



CLEARFIL MAJESTY™ Posterior

The innovative Nano Dispersion Technology is a new filler surface treatment technology which permits a larger quantity of nano fillers and micro fillers (glass fillers) to be dispersed in the resin matrix. CLEARFIL MAJESTY™ Posterior has the highest filler load of all commercialized composites: 92 wt% (82 vol%).

High density inorganic filler load technology generates the three most significant characteristics for a posterior composite:

1.High mechanical strength

2.Low polymerization shrinkage

3.Low thermal expansion coefficient

SUPERIOR PHYSICAL PROPERTIES

FILLER LOAD	92 wt%, 82 vol%	THERMAL EXPANSION COEFFICIENT	15.0 10⁻⁶/°C
COMPRESSIVE STRENGTH	504 MPa	VICKERS HARDNESS	139 Hv (cf. Human enamel : 270-366 Hv)
FLEXURAL STRENGTH*	177 MPa	WATER SORPTION*	9.7 µg/mm³
VOLUMETRIC SHRINKAGE**	1.5 vol%	WATER SOLUBILITY*	Less than 1 µg/mm³

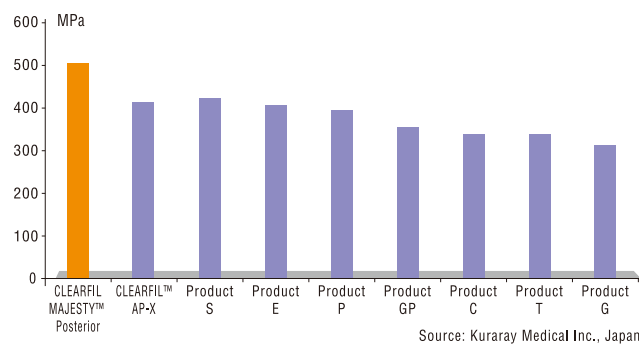
*ISO 4049:2009
**ARCHIMEDES METHOD



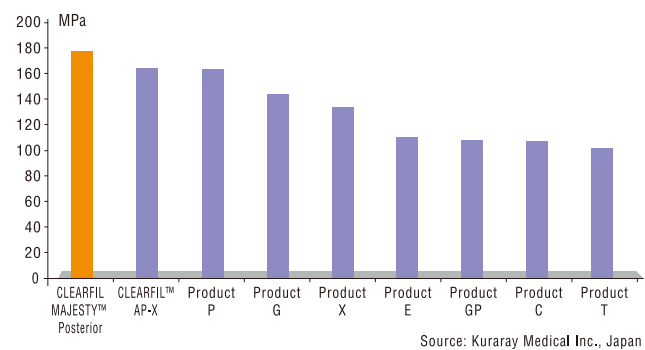
MECHANICAL STRENGTH

High compressive strength and flexural strength are one of the most significant characteristics for a posterior composite. The occlusal surface of posterior composite restorations suffers from strong chewing stress.

COMPRESSIVE STRENGTH



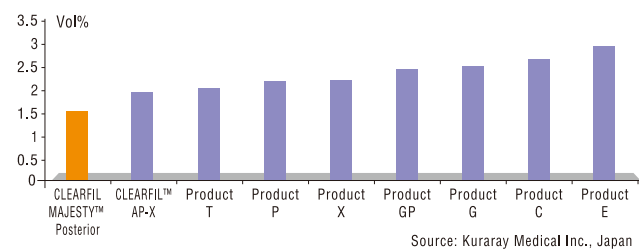
FLEXURAL STRENGTH



VOLUMETRIC POLYMERIZATION SHRINKAGE

For posterior restorations, cavities may be extensive and the adhesion interface may suffer from strong polymerization stressing during polymerization. Polymerization shrinkage is an important factor when achieving good adaptation to the tooth.

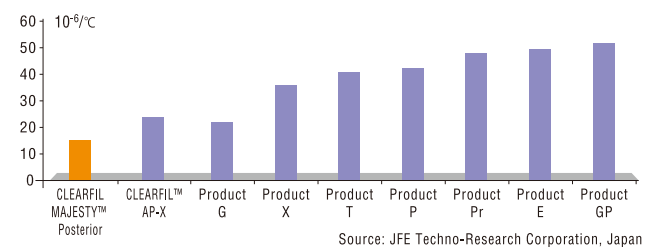
VOLUMETRIC SHRINKAGE



THERMAL EXPANSION COEFFICIENT

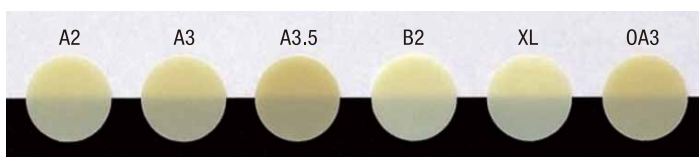
The restored composite suffers thermal stress in the mouth in the long term. A low thermal expansion coefficient of the posterior composite is one of the most important characteristics for posterior restorations.

THERMAL EXPANSION COEFFICIENT(30-60°C)



CONTAINER & SHADE VARIATION

Both Syringe and Pre-Loaded Tip (PLT) are available in 6 esthetic shades for posterior restoration.



- Read the Instruction for Use supplied with the product before use.
- The measurement data contained in this brochure are obtained by the results of tests performed by Kuraray Medical Inc. and JFE Techno-Research Corporation, Japan.
- The colors of the product pastes and hardened products shown in this brochure may vary from the actual colors.
- The specifications and appearance of the product are subject to change without notice.

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