

THE DENTAL ADVISOR™

"Improving Patient Care Through Research & Education"



Update: Flowable Composites

In recent years many manufacturers have introduced flowable composites, often marketed alongside more viscous, all-purpose composites. Flowable composites have less filler, in some instances 25% less, than all-purpose composites. Less filler results in a product that many clinicians feel offers better adaptation to cavity walls when used under packable composites.

Flowable composites are syringeable, can be placed precisely and cured incrementally. Their physical properties allow clinicians to use these products successfully to repair crown margins and ceramic fractures. When selecting a flowable composite, it is important to consider radiopacity. When using the flowable material as a liner under a more traditional composite or under a packable

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THE DENTAL ADVISOR evaluates and rates dental products and equipment by objective clinical and laboratory protocols. The publication consists of clinical evaluations, comprehensive long-term evaluations, product comparisons and specialty reports. To subscribe, please call 734-665-2020.

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THE DENTAL ADVISOR Recommends:

Tetric Flow (98%), Palfique Estelite LV (96%), 3M ESPE Filtek Flow (94%), Heliomolar Flow (94%), Admira Flow (93%), GrandiO Flow (93%)



Tetric Flow
(Ivoclar Vivadent)



Palfique Estelite LV
(Tokuyama Dental)



Heliomolar Flow
(Ivoclar Vivadent)



GrandiO Flow
(VOCO)

composite, a radiolucent flowable material may be mistaken for recurrent decay. Flowable composites with higher radiopacity, however, are less translucent, which may produce an undesirable esthetic outcome for Class V applications.

Difficulties with flowable composites are most often encountered when the product is misused in large restorations or in areas where occlusal forces will cause rapid premature wear. Additionally, because flowable composites are associated with high polymerization shrinkage, it is important to incrementally place and cure them. With a greater availability of shades and improved physical properties, flowable composites will remain part of the armamentarium of most restorative dentists.

Applications

- Conservative Class I restorations
- Facial composite veneers
- Coverage of enamel hypoplastic defects
- Small carious pits and fissures
- Cervical abfraction lesions
- Cervical caries
- Root surface caries
- Repairs of crown margins
- Sealants



Advantages

- Easy to place
- Good adaptation to small, narrow areas
- Low modulus of elasticity for use in abfraction lesions
- Good polish

Disadvantages

- High polymerization shrinkage
- Lower strength – not good for large restorations
- Poor wear resistance
- Greater susceptibility to staining

Clinical Notes

- Shade selection should precede tooth preparation as the tooth may become desiccated with isolation
- Use a total-etch or self-etch bonding agent
- Most useful shades – A1, A2, A3, B2, C3
- Finishing sequence – gross reduction with flame-shaped diamonds, 16-fluted finishing burs, abrasive-impregnated rubber finishing cups
- Polish with polishing paste
- When restoring isolated pits or fissures, flowable composite can be used with air abrasion and sealant to complete the restoration ■

Product	Company	Shades	Fluoride Releasing	Radiopaque*	Delivery System	Cost/ml, \$	Rating
3M ESPE Filtek Flow	3M ESPE	6	Yes	Yes	Syringe	\$37.85	94%
4 Seasons Flow	Ivoclar Vivadent	8	Yes	Yes	Syringe	\$23.90	91%
Admira Flow	VOCO	7	No	Yes	Syringe, unit dose	\$22.45	93%
ÆLITEFLOW	Bisco	13	No	Yes	Syringe	\$10.66	92%
ÆLITEFLOW LV	Bisco	2	No	Yes	Syringe	\$10.66	na
Esthet.X Flow	DENTSPLY Caulk	7	Yes	Yes	Syringe	\$27.55	92%
Flow-It ALC	Pentron Clinical Technologies	26	Yes	Yes	Syringe	\$8.45	92%
Flowline	Heraeus Kulzer	9	Yes	Yes	Syringe	\$21.53	88%
GRADIA DIRECT Flo	GC America	7	Yes	Yes	Syringe	\$23.13	na
GRADIA DIRECT LoFlo	GC America	7	Yes	Yes	Syringe	\$23.13	na
Grandio Flow	VOCO	10	No	Yes	Syringe	\$29.48	93%
Heliomolar Flow	Ivoclar Vivadent	7	Yes	Yes	Syringe	\$26.73	94%
Palfique Estelite LV	Tokuyama Dental	5	No	Yes	Syringe	\$19.76	96%
PermaFlo	Ultradent	9	Yes	Yes	Syringe	\$12.50	91%
Tetric Flow	Ivoclar Vivadent	12	Yes	Yes	Syringe, unit dose	\$23.86	98%
Venus Flow	Heraeus Kulzer	14	Yes	Yes	Syringe	\$21.50	na

*Products have various levels of radiopacity.

EDITORS' NOTES: Only products evaluated by THE DENTAL ADVISOR are eligible for listing as a recommended product. Table information provided by manufacturer. Costs are listed for comparison only and are not used to calculate the ratings; all costs shown in U.S. dollars.