



Abrasion of Indirect Composites

E. Hoffman, M. Rosentritt, M. Behr, G. Handel

Department of Prosthetic Dentistry, University of Regensburg, Germany: Abrasion of indirect composite restorations after artificial abrasion in the mastication simulation in a three-media-wear machine. (DGZPW Abstracts #11) 2000.*

Both in the mastication simulator machine and in the three-media-wear machine, Sinfony indirect lab composite showed significantly less abrasion than belleGlass, Sculpture, and Targis.



Impact Strength

DIN 53 453, Transverse Impact Test*

At 7.5 mJ/mm², Sinfony indirect lab composite surpasses other modern materials, such as Solidex, belleGlass, and Targis.



Sinfony[™] Indirect Lab Composite



Compressive Strength

C. Trajtenberg, M. Eldiwany, D. Li, J. M. Powers

Houston Biomaterials Research Center, UT-Houston Dental Branch, Houston, Texas, USA: Properties of Advanced Laboratory Composites. (IADR Abstracts #413) 1999.*

Demonstrates that Sinfony indirect lab composite has significant advantages in compressive strength over two out of three competitive materials.



120

100

80

40

20

0

Sinfon

60 H

Flexural Modulus

C. Trajtenberg, M. Eldiwany, D. Li, J. M. Powers

Houston Biomaterials Research Center, UT-Houston Dental Branch, Houston, Texas, USA: Properties of Advanced Laboratory Composites. (IADR Abstracts #413) 1999.*

Designed with a lower flexural modulus, Sinfony indirect lab composite is less brittle than other composites, making it an ideal material for veneering over flexible understructures such as fiber bridge substrates or telescope crowns.

Flexural Strength

C. Trajtenberg, M. Eldiwany, D. Li, J. M. Powers

Houston Biomaterials Research Center, UT-Houston Dental Branch, Houston, Texas, USA: Properties of Advanced Laboratory Composites. (IADR Abstracts #413) 1999.*

Sinfony indirect lab composite's flexural strength was tested and measured to be higher than other popular brands.



Sculpture

Artglass

Targis

Solubility

C. Trajtenberg, M. Eldiwany, D. Li, J. M. Powers

Houston Biomaterials Research Center, UT-Houston Dental Branch, Houston, Texas, USA: Properties of Advanced Laboratory Composites. (J. Dent Res, Vol 78 #929) 1999.*

In a test of solubility, which is associated with water repellence of the polymer matrix, Sinfony indirect lab composite is clearly superior.

*These studies were sponsored by 3M ESPE AG.

Panavia 21

Variolink Ultra

strength | beauty | versatility



Toothbrush Abrasion

3M ESPE internal test results

A toothbrush abrasion study showed abrasion resistance of the ultrafine particle composite of Sinfony indirect lab composite.

Shear Bond Strength (after 24 hours water storage or thermocycling–TC)

T. Frauenholz, M. Rosentritt, M. Behr, R. Lang, G. Handel

Department of Prosthetic Dentistry, University of Regensburg, Germany: Determination of shear bond strength of composites on fiber-reinforced FPD material. (IADR Abstracts #1486) 1998.*

Repairing of new and aged Vectris material was simulated via *in vitro* shear tests. Sinfony indirect lab composite is suitable for repairing—also on aged samples, whereas Artglass and Dentacolor showed no adhesion at all.

Shear Bond Strength (to In-Ceram thermocycling)

H.N. Alkumru, M. Özcan, I. Negriz, D. Gemalmaz, A. Akkaya

Marmara University, Faculty of Dentistry, Istanbul, Turkey, and Medical and Dental School of Köln, Germany: Effect of Surface Treatment on the Bond Strength of Luting Cement to In-Ceram. (IADR Abstracts #2238) 1998.*

Tribochemical coating with Rocatec increased significantly the bond strength of luting cements (composite and compomer) to In-Ceram in comparison to acid etching or air abrading.



acid etching

air abrading

O 3M[™] ESPE[™]

System

Rocatec™ Bonding

Dyract Cem

Sono Cem

30

50

40

30

20

10

0

MPa

Sinfony[™] Indirect Lab Composite

Product	Filler % Weight Volume		Average Particle Size (µ)	Curing Method	Reinforcement Fiber
belleGlass HP KerrLab	74.0-87	56-72.5	0.5	Light Heat Pressure	Connect
Sculpture	77.5	68	0.6	Light Heat Vacuum	FibreKor has glass fibers pre-impregnated with resin
FibreKor Jeneric/Pentron	60.0	41			
Sinfony	50	N/A	0.6	Light Vacuum	N/A
Targis/Vectris Ivoclar-Williams	78	N/A	0.7	Targis Vectris Light Light Heat Pressure Vacuum	Vectris has pre-impregnated glass fibers

Indirect Resin Systems — Reality's Choices

Reality Publishing Co., Vol. 15, 2001

Testing found Sinfony indirect lab composite to have very good esthetics and to be easy for the lab to fabricate.



Insertion of Sinfony Indirect Lab Composite

++++1/2

The Dental Advisor, Vol. 18, 2001

Clinicians were very pleased with the clinical performance of Sinfony indirect lab composite, rating the "ease of finishing/ polishing" very high.



Two-Year Recall of Sinfony Lab Indirect Composite

++++^{1/2} *The Dental Advisor*, Vol. 19, 2002

Overall, clinicians rated Sinfony indirect lab composite in the very good to excellent range for two-year recall, with high marks for "resistance to fracture/chipping" and "patient satisfaction."

