# SDI STAE DENTIN / ENAMEL SINGLE

COMPONENT ADHESIVE



## SINGLE COMPONENT TOTAL ETCH ADHESIVE

Stae is a fluoride releasing single component dentine/ enamel total etch adhesive system, designed for direct bonding. Stae completely and homogeneously infiltrates the hybrid layer to ensure superior bonding to the tooth.

## ONE BOTTLE SYSTEM

Stae combines both primer and adhesive in one bottle to simplify the technique and decrease patient chair time.

## FLUORIDE RELEASE

Fluoride's cariostatic effect enhances remineralisation and inhibits enamel demineralisation. In an aqueous environment, the fluoride ions in Stae diffuse from the resin into the surrounding tooth. This ionic movement is caused by oral fluid passing in and out of the resin and tooth, acting as a carrier for the fluoride ions.

### NON BIS-PHENOL A

Stae avoids the Bis-phenol A hormonal imbalance controversy, as it does not contain the related BisGMA resin.

#### CUMULATIVE FLUORIDE RELEASE \*\*





## BONDS TO MOIST AND DRY TOOTH SURFACES

Stae's carrier solvent is a mixture of acetone and water. The acetone carries Stae deep into the demineralised dentine and the water re-moistens any dry dentine.

## HIGH BOND STRENGTH

Stae's complete hybridisation of the resin into the demineralised dentine results in high bond strength.

#### BOND STRENGTH [2]\*\*

STAE							
ADPER	SINGLE BOND	)*		_			
OPTIBO	ND SOLO*		_	_			
ONE ST	EP*						
BOND-1	*						
				_			
)	5	10	15	20	25	30	35 [MPa]

## COMPLETE AND CONSISTENT HYBRIDISATION

"SEM observations of the Stae adhesive system revealed hybridisation at the dentineresin interface. The hybrid layer appears well developed with a uniform thickness of around 3 to 4 microns."<sup>(2)</sup> Stae's well infiltrated hybrid layer, compared to the other brands below, illustrates Stae's complete sealing of the dentinal tubules, minimizing post operative sensitivity. Evident in the photographs is Stae's "intimate adaptation of the interdiffused resin to the remaining sound tooth structure and uniform image density.

There are no gaps or voids visible within the hybrid layer. Such a characterization has previously been associated with adhesive systems with durable clinical success. A similar result was found with 3M Single Bond<sup>\*</sup> adhesive system.

With the Optibond Solo<sup>\*</sup> adhesive, a less well defined hybrid layer resulted. Within the layer are areas void of resin interdiffusion. Further, the non-uniform image density suggests a lack of complete hybrid layer development."  $^{(3)}$ 

#### ADVANTAGES

High bond strength

Fluoride releasing

No Bis-Phenol A or it's derivatives

Easy to use - bonds to moist and dry tooth surfaces

Complete and consistent hybridisation

#### INDICATIONS

All direct restorative composites

Compomers

Composite / Ceramic^ / Metal^ / Porcelain^ Repairs





Magn 5,000x

Magn 5,000x

ADPER SINGLE BOND\*



OPTIBOND SOLO\*



Magn 5,000x

## NO VOIDS

Stae's "hybrid layer is continuous with the residual dentine layer with no evidence of separation or voids."<sup>[2]</sup>



SEM Magn 2,000x

## COMPLETE SEAL

Stae's "hybrid layer is very uniform with no variation in staining which represents a uniform interdiffusion of adhesive resin into the demineralised layer. The collagen framework appears totally encapsulated with resin."<sup>(2)</sup>



TEM Magn 2,000x

## INTACT COLLAGEN

"Collagen fibrils within the hybrid layer show evidence of complete banding with no signs of denaturing or loss of structural integrity."<sup>[2]</sup>



SEM Magn 10,000x

## **Dental Advisor Rating**

>>> Stae is a highly recommended adhesive system designed for composite, compomer, and porcelain bonding. It received an 86% rating.<sup>[1]</sup>

### INSTRUCTIONS



## ORDER DETAILS



#### STAE

Stae Bottle refill 1 x 5mL Stae bottle

8100201

\* Apter Single Bond, Optibond Solo, One Step and Bond-1 are not registered trademarks of SDI Limited.

\*\* Source-Published and SDI test data.

^ Bonding surface requires pre-treatment with a silane primer.

(1) The Dental Advisor. September 1998, Vol 15, No 7.

[2] Duke E. S., DDS, MSD, (1997). Ultrastructural and physical property studies of Stae single component adhesive system. The University of Texas Health Science Center, San Antonio, USA.

[3] Duke E. S., DDS, MSD, [1997]. Research Report, The University of Texas Health Science Center at San Antonio.



MADE IN AUSTRALIA by SDI Limited Bayswater, Victoria 3153 Australia www.sdi.com.au AUSTRALIA 1800 337 003 AUSTRIA 00800 0225 5734 BRAZIL 0800 770 1735 FRANCE 00800 0225 5734 GERMANY 0800 100 5759



ITALY 00800 0225 5734 NEW ZEALAND 0800 808 855 SPAIN 00800 0225 5734 UNITED KINGDOM 00800 0225 5734 USA & CANADA 1 800 228 5166