



Evidence-based Dentistry Newsletter

GCI AG, March 2021



G-CEM ONE

Self-adhesive
resin cement

Key Map

	Strong
	Durable
	Aesthetic
	Time-saving
	Cost-efficient



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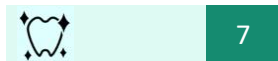
Shear bond strength to modern ceramics for restoration.

Irie M, Okada M, Taketa H, Torii Y, Yoshihara K, Matsumoto T. 2019. The 150th Meeting of the Japanese Society of Conservative Dentistry. P21. (available only in Japanese)



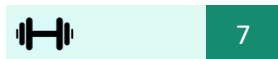
Evaluation of Bonding Properties of Resin Cement in Self-cure Mode.

Sato K, Arita A, Kumagai T. 2019. 97th General Session & Exhibition of the IADR. 1884.



Shear bond strength of resin cements to saliva contaminated dentin.

Ishii R, Yokoyama M, Tamura T, Takamizawa T, Amari Y, Miyazaki M, Amano S. 2020. The 153rd Meeting of the Japanese Society of Conservative Dentistry. P24. (available only in Japanese)



Novel Universal Cement Bond Strength to Multiple Substrates.

Cowen M, Joshi G, Heiss MA, Graham D , Powers JM. 2021. 99th General Session & Exhibition of the IADR. 0934.




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Retention of Ceramic Copings Luted With RMGI and Resin Cement.

Huang C, Joshi G, Heiss MA, Lawson NC. 2021. 99th General Session & Exhibition of the IADR. 1238

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Wear resistance of a new self-adhesive resin cement.

Horn Borter V, Hirano K, Fusejima F. 2021. 99th General Session & Exhibition of the IADR. 1239

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Evaluation of Immediate Bonding Property of Resin Cement.

Sato K, Hirano K, Fusejima F. 2021. CED-IADR/NOF Oral Health Research Congress. 0202

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Comparison of Immediate Bonding Strength to Dentin of Resin Cement.

New

Ishiwata K, Hirano K, Fusejima F. The International Academy for Adhesive Dentistry - 2021 Meeting.26

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Evaluation of Bonding Property to Tooth of Self-Adhesive Resin Cement with Optional Pretreatment Material.

New


Sato K. International College of Prosthodontic – 2021 Meeting

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Immediate bond performance of resin composite luting systems to saliva contaminated enamel and dentin in different curing modes.

New

Ishii R, Takamizawa T, Katsuki S, Iwase K, Shoji M, Sai K, Tsukimoto A, Miyazaki M. Eur J Oral Sci. 2022;e12854

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Shear bond strengths of two newly marketed self-adhesive resin cements to different substrates: A light and scanning electron microscopy evaluation.

New

Atalay C, Vural U, Miletic I, Gurgan S. 2021. Microsc Res Tech. 2021;1-9.

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Curing Assessment of "Touch and cure" Resin Cements: In-situ Study.

Eamsa-ard P, Alvarez-Iloret P, Matsumoto M, Sano H. 2020. 98th General Session & Exhibition of the IADR. 2467.

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Effect of light irradiation and primer application on polymerization of self-adhesive resin cements monitored by ultrasonic velocity.

Kurokawa H, Shiratsuchi K, Suda S, Nagura Y, Suzuki S, Moritake N, Yamauchi K, Miyazaki M. 2018. Dental Materials Journal. 37(4):534-541.


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



Abstracts

G-CEM ONE

TITLE	Shear bond strength to modern ceramics for restoration
REFERENCE	Irie M, Okada M, Taketa H, Torii Y, Yoshihara K, Matsumoto T. 2019. The 150th Meeting of the Japanese Society of Conservative Dentistry. P21. (available only in Japanese)
	Bond strength of G-CEM ONE with either hydrofluoric etched lithium disilicate or feldspar surface may help to have a reliable clinical performance.



TITLE	Evaluation of Bonding Properties of Resin Cement in Self-cure Mode
REFERENCE	Sato K, Arita A, Kumagai T. 2019. 97th General Session & Exhibition of the IADR. J Dent Res 98 (Spec Iss A):abstract number 1884. https://iadr.abstractarchives.com/abstract/19iaqs-3163131/evaluation-of-bonding-properties-of-resin-cement-in-self-cure-mode
	Tensile bond strength against bovine dentin of G-CEM ONE in the self-adhesive mode was 31% and 53% higher than RelyX Unicem and Maxcem Elite respectively. When AEP was used, 49% and 89% higher than RelyX Ultimate and NX3 Nexus respectively.
	This study suggests that G-CEM ONE may have better clinical performance than those products tested.



TITLE	Shear bond strength of resin cements to saliva contaminated dentin.
REFERENCE	Ishii R, Yokoyama M, Tamura T, Takamizawa T, Amari Y, Miyazaki M, Amano S. 2020. The 153rd Meeting of the Japanese Society of Conservative Dentistry. P24. (available only in Japanese)
	G-CEM ONE showed the highest shear bond strength against bovine dentin among all the tested groups, and it was not affected by saliva contamination.
	Even in the presence of saliva contamination, G-CEM ONE may have better clinical results than those products tested.





Abstracts

G-CEM ONE

TITLE	Novel Universal Cement Bond Strength to Multiple Substrates
REFERENCE	Cowen M, Joshi G, Heiss MA, Graham D , Powers JM. 2021. 99th General Session & Exhibition of the IADR. . J Dent Res 100 (Spec Iss A):abstract number 0934. Novel Universal Cement Bond Strength to Multiple Substrates IADR Abstract Archives
 In the self-adhesive mode, G-CEM ONE showed the highest or equivalent shear-bond strength to the other groups tested. G-CEM ONE+AEP had the highest bond strength to dentin after 10 min, without significant drop after aging.	
 This study suggests that G-CEM ONE may have long-term clinical success with different restorative materials.	



TITLE	Retention of Ceramic Copings Luted With RMGI and Resin Cement
REFERENCE	Huang C, Joshi G, Heiss MA, Lawson NC. 2021. 99th General Session & Exhibition of the IADR. J Dent Res 100 (Spec Iss A): abstract number 1238. Retention of Ceramic Copings Luted With RMGI and Resin Cement IADR Abstract Archives
 G-CEM ONE showed excellent retentive strength with lithium disilicate. AEP significantly increased the retention.	
 This study suggests that due to the high retentive tensile strength of G-CEM ONE, clinical success may be achieved.	

TITLE	Wear resistance of a new self-adhesive resin cement
REFERENCE	Horn Borter V, Hirano K, Fusejima F. 2021. 99th General Session & Exhibition of the IADR. J Dent Res 100 (Spec Iss A):abstract number 1239. Wear Resistance of a new Self-Adhesive Resin Cement IADR Abstract Archives
 G-CEM ONE showed lower volume loss than the other groups in both, light-cure and self-cure modes.	
 Thanks to the high wear resistance, G-CEM ONE can maintain an invisible cement line, enabling high aesthetic indirect restorations.	





Abstracts



G-CEM ONE

TITLE	Evaluation of Immediate Bonding Property of Resin Cement
REFERENCE	Sato K, Hirano K, Fusejima F. 2021. CED-IADR/NOF Oral Health Research Congress. J Dent Res 100 (Spec Iss B): abstract number 0202. https://ced-iadr2021.com/wp-content/uploads/2021/09/Abstract-book_2021-9-20_Adjusted-version.pdf p.98.
	At 5 min, the SBS of G-CEM ONE +AEP to dentin was much higher compared to RelyX Universal+ ScotchBond Universal Plus and PANAVIA V5+ tooth primer. The superiority was maintained after 24hours.
	This study suggests that G-CEM ONE may have netter clinical performance than those products tested.

New

TITLE	Comparison of Immediate Bonding Strength to Dentin of Resin Cement
REFERENCE	Ishiwata K, Hirano K, Fusejima F. The International Academy for Adhesive Dentistry - 2021 Meeting. Abstract id 26. http://adhesivedentistry.org/2021abstractid/26/
	G-CEM ONE in combination with AEP showed the highest bond strength at 5 min. and 24-h.
	This study suggests that G-CEM ONE may have netter clinical performance than those products tested.

New



TITLE	Evaluation of Bonding Property to Tooth of Self-Adhesive Resin Cement with Optional Pretreatment Material
REFERENCE	Sato K. International College of Prosthodontic – 2021 Meeting. <i>Link not available</i>
	G-CEM ONE in combination with AEP showed the highest bond strength at 24-h.
	This study suggests that G-CEM ONE may have netter clinical performance than those products tested.





Full Paper

G-CEM ONE

New

TITLE	Immediate bond performance of resin composite luting systems to saliva-contaminated enamel and dentin in different curing modes
REFERENCE	Ishii R, Takamizawa T, Katsuki S, Iwase K, Shoji M, Sai K, Tsukimoto A, Miyazaki M. Eur J Oral Sci. 2022;e12854. https://doi.org/10.1111/eos.12854
	G-CEM ONE in combination with AEP showed a high bond strength to enamel and dentin and it was not affected by saliva contamination.
	This study suggests that G-CEM ONE may have netter clinical performance than those products tested.



New

TITLE	Shear bond strengths of two newly marketed self-adhesive resin cements to different substrates: A light and scanning electron microscopy evaluation
REFERENCE	Atalay C, Vural U, Miletic I, Gurgan S. 2021. Microsc Res Tech. 2021;1–9. https://doi.org/10.1002/jemt.24031
	G-CEM ONE+AEP demonstrated superior SBS to dentin compared to RelyX Universal+Scotchbond Universal Plus. Both cements had similar SBS to enamel and LiSi Block.
	This study suggests that G-CEM ONE may have long-term clinical success with different restorative materials.



Abstracts


G-CEM ONE Paste Pak

TITLE	Curing Assessment of “Touch and cure” Resin Cements: In-situ Study
REFERENCE	<p>Eamsa-ard P, Alvarez-Iloret P, Matsumoto M, Sano H. 2020. 98th General Session & Exhibition of the IADR. J Dent Res 99 (Spec Iss A): abstract number 2467.</p> <p>https://iadr.abstractarchives.com/abstract/20iaqs-3328173/curing-assessment-of-touch-and-cure-resin-cements-in-situ-study</p>
	Conversion degree of G-CEM ONE was 10% and 7% higher than PANA VIA V5 and RelyX Ultimate respectively.
	High degree of conversion leads to more durable bonding in clinical cases.



Full Paper

G-CEM ONE Paste Pak

TITLE	Effect of light irradiation and primer application on polymerization of self-adhesive resin cements monitored by ultrasonic velocity
REFERENCE	Kurokawa H, Shiratsuchi K, Suda S, Nagura Y, Suzuki S, Moritake N, Yamauchi K, Miyazaki M. 2018. Dental Materials Journal. 37(4):534-541. https://doi.org/10.4012/dmj.2017-215
	This study demonstrated that G-CEM ONE is less technique sensitive as compared to RelyX Ultimate. Adhesive performance of G-CEM ONE will not be affected by insufficient light source.