

Author: [ADVANCED](#)

Volume Page

Keyword: [TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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[\[PDF \(771K\)\]](#) [\[References\]](#)**Effect of a Metal Priming Agent on Wear Resistance of Gold Alloy-indirect Composite Joint**[Tomohisa OGINO](#)¹⁾, [Hiroyasu KOIZUMI](#)¹⁾²⁾, [Mika FURUCHI](#)¹⁾²⁾, [Mahoko MURAKAMI](#)¹⁾, [Hideo MATSUMURA](#)¹⁾²⁾ and [Naomi TANOUE](#)³⁾

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Abstract:

The purpose of the current study was to evaluate the effect of a metal priming agent on wear resistance of gold alloy-composite joint. Four types of plate specimen were prepared: composite (Estenia C&B or Epricord) alone, type 4 gold alloy alone, alloy-composite joint without priming agent, and alloy-composite joint bonded with a priming agent (Alloy Primer). Three-body wear test was performed using the plate specimens, gold alloy antagonist, and polymer slurry. Joined specimens with priming exhibited less wear depth (in μm ; 21.0 for Estenia and 24.9 for Epricord) than the joined specimens without priming (57.8 for Estenia and 46.7 for Epricord). Wear depth of the single plate specimens when abraded with the gold alloy antagonist was ranked as follows: Estenia (9.6), gold alloy (12.8), and Epricord (19.1). It was concluded that the use of a metal priming agent at the alloy-composite interface effectively enhanced the wear resistance of the joined area when under cycled loading.

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