

ABSTRACT

Provided is a method for obtaining a chemical conversion coating-treated zinc-aluminum-magnesium alloy-plated steel sheet having extremely excellent in corrosion resistance and adhesiveness to a resin coating film. The method is for treating the surface of a zinc-aluminum-magnesium alloy-plated steel sheet with a metal surface treatment agent, in which the metal surface treatment agent contains a compound (A) having a zirconyl ($[\text{Zr}=\text{O}]^{2+}$) structure, a vanadium compound (B), a titanium fluorocomplex compound (C), an organic phosphorus compound (Da) containing a phosphoric acid group and/or a phosphonic acid group, an inorganic phosphorus compound (Db), a specific aqueous acrylic resin (E), and an oxazoline group-containing polymer (F) as a curing agent, each in a predetermined amount, and the pH of the metal surface treatment agent is 3 to 6.