CLAIMS

[Claim 1] A hot-dip Al-Zn-Si-Mg coated steel sheet comprising a coating, wherein

the coating has a composition containing Al: 45 mass% to 65 mass%, Si: 1.0 mass% to 3.0 mass%, Mg: 1.0 mass% to 10.0 mass%, and Mn: 0.01 mass% to 0.5 mass%, with the balance being Zn and inevitable impurity, and a ratio of the Mn content to the Mg content in the coating (Mn/Mg) be 0.02 or more (Mn/Mg $\geqq$ 0.02) in mass ratio,

wherein a height difference of a steel sheet surface per mm of length is 10 μm or less in an area excluding 50 mm from both ends of the steel sheet.

[Claim 2] The hot-dip Al-Zn-Si-Mg coated steel sheet according to claim 1, wherein Mn content in the coating is 0.1 mass% to 0.3 mass%.

[Claim 3] The hot-dip Al-Zn-Si-Mg coated steel sheet according to claim 1 or 2, further comprising an alloy layer containing Mn at an interface between the coating and a base steel sheet.

[Claim 4] The hot-dip Al-Zn-Si-Mg coated steel sheet according to any one of claims 1 to 3, wherein the coating further contains one or more elements selected from B, Ca, Ti, V, Cr, Sr, Mo, In, Sn, Sb, Ce, or Bi in a total amount of 0.01 mass% to 3.0 mass%.

[Claim 5] A surface-treated steel sheet comprising a coating of a hot-dip Al-Zn-Si-Mg coated steel sheet according to any one of claims 1 to 4, and a chemical conversion layer formed on the coating, wherein

the chemical conversion layer contains at least one resin selected from an epoxy resin, a urethane resin, an acrylic resin, an acrylic silicon resin, an alkyd resin, a polyester resin, a polyalkylene resin, an amino resin, or a fluororesin, and at least one metal compound selected from a P compound, a Si compound, a Co compound, a Ni compound, a Zn compound, an Al compound, a Mg compound, a V compound, a Mo compound, a Zr compound, a Ti compound, or a Ca compound.

[Claim 6] A prepainted steel sheet comprising a paint layer formed either

directly on a coating of a hot-dip Al-Zn-Si-Mg coated steel sheet according to any one of claims 1 to 4, or on a chemical conversion layer on top of the coating, wherein

the chemical conversion layer contains: a resin component containing (a) an anionic polyurethane resin having an ester bond and (b) an epoxy resin having a bisphenol skeleton, in a total amount of 30 mass% to 50 mass%, in which a content ratio of (a) to (b), (a):(b), is in a range from 3:97 to 60:40 by mass; and an inorganic compound containing 2 mass% to 10 mass% of a vanadium compound, 40 mass% to 60 mass% of a zirconium compound, and 0.5 mass% to 5 mass% of a fluorine compound, and

the paint layer includes at least a primer paint layer, the primer paint layer containing: a polyester resin having a urethane bond; and an inorganic compound containing a vanadium compound, a phosphoric acid compound, and a magnesium oxide.