

【CLAIMS】

【Claim 1】

A metal card comprising:
a metal card sheet made of duralumin; and
an anodized layer formed by anodizing a surface of the metal card sheet,
wherein a background color or pattern of the metal card is determined
according to a composition of electrolyte of the anodizing for forming the anodized
layer.

【Claim 2】

The metal card according to claim 1, further comprising a contact IC chip
attached on a first etched area through an adhesive, the first etched area being
formed on a front surface of the metal card sheet on which the anodized layer is
formed,

wherein the first etched area is formed as a shape capable of receiving the
contact IC chip by performing etching before the anodizing, or the first etched
area is formed as a shape capable of receiving the contact IC chip by performing
etching after the anodizing and performing anodizing the etched portion, and

wherein the shape of the first etched area is a step shape having a shallow
edge portion and a deep central portion.

【Claim 3】

The metal card according to claim 2, wherein a contact portion of the first
etched area being in contact with the contact IC chip is roughened through laser
sanding, or a contact portion of the first etched area being in contact with the
contact IC chip is roughened through laser sanding and is applied with a primer.

【Claim 4】

The metal card according to claim 1, further comprising a back-surface

attachment member attached on a second etched area through an adhesive, the second etched area being formed on a back surface of the metal card sheet on which the anodized layer is formed,

wherein the second etched area is formed by performing etching so as to have a size and depth capable of receiving the back-surface attachment member, and

wherein the back-surface attachment member is one or more of a member formed by combining a magnetic film with a base sheet, a member formed by combining a signature plate with a base sheet, and a member formed by combining a hologram film with a base sheet.

【Claim 5】

The metal card according to claim 4, wherein the second etched area is roughened through laser sanding or the second etched area is roughened through the laser sanding and, after that, is applied with a primer.

【Claim 6】

The metal card according to claim 1, further comprising a back-surface attachment member transferred to a sanded area formed on a back surface of the metal card sheet on which the anodized layer,

wherein the sanded area is formed by roughening an area corresponding to a size of the back-surface attachment member through laser sanding, and

wherein the back-surface attachment member is transferred by laminating a transfer film, on which one or more of a magnetic film, a signature plate, and a hologram film is formed, on the sanded area and performing thermal pressing.

【Claim 7】

The metal card according to claim 6, wherein the sanded area is further applied with a primer.

【Claim 8】

A method of manufacturing a metal card, comprising:
manufacturing metal card sheet using a duralumin; and
anodizing a surface of the metal card sheet with electrolyte to form an
anodized layer on the surface of the metal card sheet,
wherein a composition of the electrolyte is determined according to a
background color and pattern of the metal card.

【Claim 9】

The method according to claim 8, further comprising
forming a first etched area by etching a first area of a front surface of the
metal card sheet on which the anodized layer is formed,
anodizing a surface of the first etched area,
applying the anodized first etched area with an adhesive, and
attaching a contact IC chip on the first etched area,
wherein the first etched area has a step shape having a shallow edge
portion and a deep central portion so as to receive the contact IC chip.

【Claim 10】

The method according to claim 8, further comprising:
forming a first etched area by etching a first area of a front surface of the
metal card sheet before the anodizing; and
applying the first etched area with an adhesive, and after that, attaching a
contact IC chip on the first etched area after the anodizing,
wherein the first etched area has a step shape having a shallow edge
portion and a deep central portion so as to receive the contact IC chip.

【Claim 11】

The method according to claim 9 or 10, further comprising roughening a

contact portion of the first etched area being in contact with the contact IC chip through laser sanding before the attachment of the contact IC chip.

【Claim 12】

The method according to claim 11, further comprising applying the roughened portion of the first etched area with a primer before the attachment of the contact IC chip.

【Claim 13】

The method according to claim 8, further comprising forming a second etched area by etching a second area of a back surface of the metal card sheet on which the anodized layer is formed; and

attaching a back-surface attachment member on the second etched area through an adhesive,

wherein the second etched area is formed so as to have a size and thickness capable of receiving the back-surface attachment member, and

wherein the back-surface attachment member is one or more of a member formed by combining a magnetic film with a base sheet, a member formed by combining a signature plate with a base sheet, and a member formed by combining a hologram film with a base sheet.

【Claim 14】

The method according to claim 13, further comprising roughening the second etched area through laser sanding before attaching the back-surface attachment member.

【Claim 15】

The method according to claim 14, further comprising applying the roughened second etched area with a primer before attaching the back-surface attachment member.

【Claim 16】

The method according to claim 8, further comprising:

forming a sanded area formed by roughening a second area of a back surface of the metal card sheet, on which the anodized layer is formed, through laser sanding; and

laminating a transfer film, on which a back-surface attachment member is formed, on the sanded area, and after that, transferring the back-surface attachment member through thermal pressing,

wherein a size of the sanded area corresponds to a size of the back-surface attachment member, and

wherein the back-surface attachment member is one or more of a magnetic film, a signature plate, and a hologram film.

【Claim 17】

The method according to claim 16, further comprising applying the sanded area with a primer before the transferring of the back-surface attachment member.

【CLAIMS】

【Claim 1】

A metal card comprising:
a metal card sheet made of duralumin;
an anodized layer formed by anodizing a surface of the metal card sheet; and
a contact IC chip attached on a first etched area through an adhesive, the first etched area being formed on a front surface of the metal card sheet on which the anodized layer is formed,
wherein a background color or pattern of the metal card is determined according to a composition of electrolyte of the anodizing for forming the anodized layer,
wherein the first etched area is formed as a shape configured to receive the contact IC chip by performing etching before the anodizing, or the first etched area is formed as a shape configured to receive the contact IC chip by performing etching after the anodizing and performing anodizing the etched portion, and
wherein the shape of the first etched area is a step shape having a shallow edge portion and a deep central portion.

【Claim 2】

The metal card according to claim 1, wherein a contact portion of the first etched area being in contact with the contact IC chip is roughened through laser sanding, or a contact portion of the first etched area being in contact with the contact IC chip is roughened through laser sanding and is applied with a primer.

【Claim 3】

The metal card according to claim 1, further comprising a back-surface attachment member attached on a second etched area through an adhesive, the second etched area being formed on a back surface of the metal card sheet on which the anodized layer is formed,
wherein the second etched area is formed by performing etching so as to have a size and depth capable of receiving the back-surface attachment member, and
wherein the back-surface attachment member is one or more of a member formed by combining a magnetic film with a base sheet, a member formed by combining a signature plate with a base sheet, and a member formed by combining a hologram film with a base sheet.

【Claim 4】

The metal card according to claim 3, wherein the second etched area is roughened through laser sanding or the second etched area is roughened through the laser sanding and, after that, is applied with a primer.

【Claim 5】

The metal card according to claim 1, further comprising a back-surface attachment member transferred to a sanded area formed on a back surface of the metal card sheet on which the anodized layer,
wherein the sanded area is formed by roughening an area corresponding to a size of the back-surface attachment member through laser sanding, and

wherein the back-surface attachment member is transferred by laminating a transfer film, on which one or more of a magnetic film, a signature plate, and a hologram film is formed, on the sanded area and performing thermal pressing.

【Claim 6】

The metal card according to claim 5, wherein the sanded area is further applied with a primer.

【Claim 7】

A method of manufacturing a metal card, comprising:
manufacturing metal card sheet using a duralumin;
anodizing a surface of the metal card sheet with electrolyte to form an anodized layer on the surface of the metal card sheet,
forming a first etched area by etching a first area of a front surface of the metal card sheet on which the anodized layer is formed,
anodizing a surface of the first etched area,
applying the anodized first etched area with an adhesive, and
attaching a contact IC chip on the first etched area,
wherein the first etched area has a step shape having a shallow edge portion and a deep central portion so as to receive the contact IC chip, and
wherein a composition of the electrolyte is determined according to a background color and pattern of the metal card.

【Claim 8】

The method according to claim 7, further comprising roughening a contact portion of the first etched area being in contact with the contact IC chip through laser sanding before the attachment of the contact IC chip.

【Claim 9】

The method according to claim 8, further comprising applying the roughened portion of the first etched area with a primer before the attachment of the contact IC chip.

【Claim 10】

The method according to claim 7 further comprising
forming a second etched area by etching a second area of a back surface of the metal card sheet on which the anodized layer is formed; and
attaching a back-surface attachment member on the second etched area through an adhesive,
wherein the second etched area is formed so as to have a size and thickness capable of receiving the back-surface attachment member, and
wherein the back-surface attachment member is one or more of a member formed by combining a magnetic film with a base sheet, a member formed by combining a signature plate with a base sheet, and a member formed by combining a hologram film with a base sheet.

【Claim 11】

The method according to claim 10, further comprising roughening the second etched area through laser sanding before attaching the back-surface attachment

member.

【Claim 12】

The method according to claim 11, further comprising applying the roughened second etched area with a primer before attaching the back-surface attachment member.

【Claim 13】

The method according to claim 7, further comprising:
forming a sanded area formed by roughening a second area of a back surface of the metal card sheet, on which the anodized layer is formed, through laser sanding; and
laminating a transfer film, on which a back-surface attachment member is formed, on the sanded area, and after that, transferring the back-surface attachment member through thermal pressing,
wherein a size of the sanded area corresponds to a size of the back-surface attachment member, and
wherein the back-surface attachment member is one or more of a magnetic film, a signature plate, and a hologram film.

【Claim 14】

The method according to claim 13, further comprising applying the sanded area with a primer before the transferring of the back-surface attachment member.

【Claim 15】

A method of manufacturing a metal card, comprising:
manufacturing metal card sheet using a duralumin;
forming a first etched area by etching a first area of a front surface of the metal card sheet before the anodizing;
anodizing a surface of the metal card sheet with electrolyte to form an anodized layer on the surface of the metal card sheet; and
applying the first etched area with an adhesive, and after that, attaching a contact IC chip on the first etched area after the anodizing,
wherein the first etched area has a step shape having a shallow edge portion and a deep central portion so as to receive the contact IC chip, and
wherein a composition of the electrolyte is determined according to a background color and pattern of the metal card.