CLAIMS

Claim 1. A β-diketone-containing container comprising:

a metal storage container to which a liquid β-diketone is charged, the metal being an aluminum material;

an inorganic film on an inner surface of the storage container, the inorganic film containing at least one material selected from the group consisting of silicon dioxide, silicon carbonitride, silicon carbide, silicon nitride, diamond, and diamond-like carbon; and

a liquid β-diketone charged in the storage container.

Claim 2. The β-diketone-containing container according to claim 1,

wherein the β-diketone includes a fluorine atom in its chemical formula.

Claim 3. The β-diketone-containing container according to claim 1 or 2,

wherein the aluminum material is pure aluminum, Al-Mg alloy, or Al-Mg-Si alloy.

Claim 4. The β-diketone-containing container according to any one of claims 1 to 3,

wherein the inorganic film has a thickness of 10 nm or more and 1000 μm or less.

Claim 5. The β-diketone-containing container according to any one of claims 1 to 4,

wherein the storage container is heated to a normal boiling point or higher of the β-diketone in use.

Claim 6. The β-diketone-containing container according to claim 1,

wherein the β-diketone is hexafluoroacetylacetone,

the inorganic film includes at least one material selected from the group consisting of silicon dioxide, silicon carbonitride, and diamond-like carbon, and

the inorganic film has a thickness of 500 nm or more and 50 μm or less.

Claim 7. The β-diketone-containing container according to claim 6,

wherein the inorganic film includes at least one material selected from the group consisting of silicon dioxide and silicon carbonitride.

Claim 8. The β-diketone-containing container according to any one of claims 1 to 7,

wherein an increase in the aluminum concentration in the β-diketone is not more than 50 ppb by mass even after retention at 80°C for one year.

Claim 9. A β-diketone charging method comprising:

a charging step of charging a liquid β-diketone into a storage container made of an aluminum material, the storage container including an inorganic film on an inner surface thereof, the inorganic film containing at least one material selected from the group consisting of silicon dioxide, silicon carbonitride, silicon carbide, silicon nitride, diamond, and diamond-like carbon.

Claim 10. The β-diketone charging method according to claim 9, further comprising, prior to the charging step, a washing step of washing the inner surface of the storage container with a same β-diketone as the β-diketone that is charged in the charging step, at a temperature of 10°C or higher.

Claim 11. The β-diketone charging method according to claim 10,

wherein the temperature in the washing step is 80°C or higher.

Claim 12. A β-diketone supply method comprising:

a supplying step of suppling a gaseous β-diketone by heating a β-diketone-containing container to 60°C or higher, the β-diketone-containing container being one according to any one of claims 1 to 8 or one obtained by the charging method according to any one of claims 9 to 11.

Claim 13. The β-diketone supply method according to claim 12,

wherein in the supplying step, the β-diketone-containing container is heated to 80°C or higher.