WHAT IS CLAIMED IS:

1. An Fe-based amorphous alloy powder, comprising:

iron;

chromium;

molybdenum;

at least one of carbon and boron; and

at least one intentionally included additional components selected from the group consisting of tungsten, cobalt, yttrium, manganese, silicon, aluminum, niobium, zirconium, phosphorus, nickel, and scandium,

wherein per 100 parts by weight of the iron,

the chromium is contained in an amount of 25.4 to 55.3 parts by weight,

the molybdenum is contained in an amount of 35.6 to 84.2 parts by weight, and

the intentionally included additional components are contained in a total amount of less than 1.125 parts by weight, and

wherein the alloy powder has an average particle size of 54 to 150 μm.

2. The Fe-based amorphous alloy powder of claim 1, wherein the alloy powder has an amorphous phase in a proportion of 90 to 100% by volume.

3. The Fe-based amorphous alloy powder of claim 2, wherein the alloy powder is prepared by cooling a composition for an alloy

from a melting point to a glass transition temperature at a cooling rate of 10^1 to 10^4 (degree/sec).

4. The Fe-based amorphous alloy powder of claim 1, wherein the alloy powder is prepared by atomizing.

5. The Fe-based amorphous alloy powder of claim 1, wherein the alloy powder is used as a material in a metal powder injection molding (MIM) process, or a three-dimensional (3D) printing process of direct energy deposit method.

6. The Fe-based amorphous alloy powder of claim 1, wherein when a shaped body is manufactured by thermal spraying using the alloy powder, a proportion of an amorphous phase in the shaped body is 90 to 100% by volume.

7. An Fe-based alloy shaped body that is manufactured by 3D printing using the alloy powder of claims 1 to 4,

wherein a proportion of an amorphous phase of an alloy in the shaped body is 90 to 100%.