WHAT IS CLAIMED IS:

1. A cutting blade having a binder and abrasive particles, wherein

the abrasive particles are fixed by the binder at least part of which is glassy carbon, and

a thickness of an outer circumferential portion of the cutting blade is smaller than a thickness of an inner circumferential portion.

2. The cutting blade according to claim 1, wherein

the abrasive particles of the cutting blade have an average particle size equal to or smaller than 12 μm.

3. A manufacturing method of a cutting blade in which abrasive particles are fixed by a binder, comprising:

a molding step of forming a molded body of a predetermined shape from mixture including a thermosetting resin and the abrasive particles;

a baking step of baking the molded body at a temperature equal to or higher than 100°C and equal to or lower than 300°C to form a baked body for 30 hours to 40 hours; and

a heat treatment step of heat treating the baked body at a temperature equal to or higher than 500°C and equal to or lower than 1500°C for 30 minutes to two hours

under an inert gas atmosphere or a vacuum atmosphere, wherein,

in the heat treatment step, at least part of the thermosetting resin is the binder of glassy carbon.

4. A cutting method of a wafer for cutting an insulating film provided on a front face side of the wafer on which a device is formed in each of a plurality of regions partitioned by scheduled division lines set in a grating pattern, the cutting method comprising:

a holding step of sucking and holding a rear face side positioned on an opposite side to the front face of the wafer by a chuck table to hold the wafer in a state in which the front face side is exposed; and

a cutting step of cutting the insulating film positioned on the front face side along the scheduled division lines using the cutting blade as claimed in any preceding claims in which abrasive particles are fixed by a binder at least part of which is glassy carbon,

wherein

a thickness of an outer circumferential portion of the cutting blade is smaller than a thickness of an inner circumferential portion.

5. The cutting method according to claim 4, wherein,

in the cutting step, the insulating film is cut using the cutting blade in which the abrasive particles have an average particle size equal to or smaller than 12 μm.

6. A cutting method of a wafer for cutting an insulating film provided on a front face side of the wafer on which a device is formed in each of a plurality of regions partitioned by scheduled division lines set in a grating pattern, the cutting method comprising:

a modifying step of modifying a shape of an outer peripheral portion of a cutting blade in which abrasive particles are fixed by a binder at least part of which is glassy carbon to make a thickness of an outer circumferential portion of the cutting blade smaller than a thickness of an inner circumferential portion by making the cutting blade cut into a linear groove formed in a dresser board,

a holding step of sucking and holding a rear face side positioned on an opposite side to the front face of the wafer by a chuck table to hold the wafer in a state in which the front face side is exposed; and

a cutting step of cutting the insulating film positioned on the front face side along the scheduled division lines using the cutting blade.