ABSTRACT

Aluminum Ribbon for Ultrasonic Bonding

[Problem to be solved] The invention provides a bonding ribbon which can guarantee a uniform fusing over the entire joint area throughout hundreds of thousands of continuous ultrasonic bonding cycles and which can realize an improved bonding strength and which also can avoid being broken while it is looped.

[Solution] The aluminum ribbon for ultrasonic bonding is formed of an aluminum alloy with aluminum content of 99 mass % or higher, and this ribbon is characterized in that it is in a shape of an extremely thin tape which is obtained by rolling a wire taken from a multi-stage wire drawing, that an average grain size within the cross section of this ribbon is 5 – 200 micrometers (μm), that the surface(s) of this extremely thin tape is mirror-finished to an extent that the surface roughness R_z is 2 micrometers (μm) or smaller, and that the ribbon has been subjected to an immersion treatment or a gas-exposure treatment wherein the liquid or gas comprises a substance having a vapor pressure higher than water such as a water-soluble hydrocarbons solvent, an alcoholic solvent, a ketone solvent, or an ether type solvent.

[Selected Drawing] None