invention having high reliability even with the low flying height is obtained by a method of manufacturing a magnetic disk having at least a magnetic layer, a protective layer, and a lubricating layer provided in this order over a substrate, wherein the lubricating layer is formed by forming on the protective layer a film of a lubricant containing a compound obtained by reacting 2 equivalents of a perfluoropolyether compound having a perfluoropolyether main chain in a molecule thereof and having an aromatic group and a hydroxyl group at an end of the molecule with 1 equivalent of an aliphatic compound having a structure capable of reacting with the perfluoropolyether compound.

[0028]

According to the invention of Configuration 8, the magnetic disk is exposed to an atmosphere at 50°C to 150°C after forming the lubricating layer in the magnetic disk manufacturing method of Configuration 7. This makes it possible to further improve the adhesion of the formed lubricating layer to the protective layer.

[0028a]

In one aspect, there is provided a magnetic disk having at least a magnetic layer, a protective layer, and a lubricating layer provided in this order over a substrate,

wherein said lubricating layer contains a compound having a perfluoropolyether main chain in a structure thereof and having an aromatic group and a polar group at each of both ends of a molecule thereof,

wherein said aromatic group is selected from the group consisting of a biphenylene group, a phthalimidyl group and an aniline group,

and wherein said polar group is selected from the group consisting of an amino group, an aldehyde group, a carbonyl group, and a sulfonic group.

[0028b]

In another aspect, there is provided a method of manufacturing a magnetic disk having at least a magnetic layer, a protective layer, and a lubricating layer provided in this order over a substrate,

wherein said lubricating layer is formed by forming on said protective layer a film of a lubricant containing a compound obtained by reacting 2 equivalents of a perfluoropolyether compound having a perfluoropolyether main chain in a molecule thereof and having an aromatic group at an end of the molecule with 1 equivalent of an aliphatic compound having an epoxy structure, said obtained compound having a perfluoropolyether main chain in a structure thereof and having an aromatic group and a polar group at each of both ends of a molecule thereof, wherein said aromatic group is selected from the group consisting of a biphenylene group, a phthalimidyl group and an aniline group, and wherein said polar group is selected from the group consisting of an amino group, an aldehyde group, a carbonyl group and a sulfonic group.

Effect of the Invention

[0029]

According to this invention, it is possible to provide a magnetic disk that is excellent in durability, particularly in LUL durability and alumina resistance, and thus has high reliability despite the low flying height of a magnetic head following the rapid increase in recording density in recent years and further despite the very strict environmental resistance following the diversification of applications.

Best Mode for Carrying Out the Invention

[0030]

Hereinbelow, this invention will be described in detail based on an