CLAIMS

1. A sealing material produced by using an uncrosslinked rubber composition, wherein

the uncrosslinked rubber composition includes

a hydrogen-containing fluoro rubber,

a thermal crosslinking agent crosslinking the hydrogen-containing fluoro rubber when the uncrosslinked rubber composition is heated to a predetermined temperature, and

a hydrogen site protective agent bonding to a carbon radical generated by applying radiation and breaking a carbon-hydrogen bond of the hydrogen-containing fluoro rubber,

the hydrogen site protective agent includes

a compound having a perfluoro skeleton having two or more alkenyl groups bonded to the carbon radical in a molecule and/or

a compound having a siloxane skeleton having two or more alkenyl groups bonded to the carbon radical in a molecule,

in the uncrosslinked rubber composition, content of the hydrogen site protective agent is 1 part by mass or more and 20 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber,

a ratio of the content of the hydrogen site protective agent in the uncrosslinked rubber composition to content of the thermal crosslinking agent is 5.0 or more 10 or less, and

the sealing material is formed by a rubber composition in which

the hydrogen-containing fluoro rubber is crosslinked by the thermal crosslinking agent when the uncrosslinked rubber is heated to a predetermined temperature,

and then

the hydrogen site protective agent is bonded to the carbon generated after radiation is applied and the carbon-hydrogen bond of the hydrogen-containing fluoro rubber is broken.

2. The sealing material of claim 1, wherein

the uncrosslinked rubber composition further includes a crosslinking aid which bonds to the hydrogen-containing fluoro rubber so as to be interposed between molecules of the hydrogen-containing fluoro rubber when the hydrogen-containing fluoro rubber is crosslinked by the thermal crosslinking agent.

3. The sealing material of claim 2, wherein

in the uncrosslinked rubber composition, a ratio of content of the crosslinking aid to content of the thermal crosslinking agent is less than 4.0.

4. The sealing material of any of claims 1-3, wherein

in the uncrosslinked rubber composition, content of an inorganic filler is 5 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber.

5. The sealing material of any of claims 1-4, wherein

in the uncrosslinked rubber composition, content of the thermal crosslinking agent is 0.5 parts by mass or more and 2.5 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber.

6. The sealing material of claim 2 or 3, wherein

in the uncrosslinked rubber composition, content of the crosslinking aid is 1 part by mass or more and 10 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber.

7. The sealing material of claim 2, 3, or 6, wherein

in the uncrosslinked rubber composition, a ratio of content of the crosslinking aid to content of the thermal crosslinking agent is 1.0 or more.

8. A sealing material produced by using an uncrosslinked rubber composition, wherein

the uncrosslinked rubber composition includes

a hydrogen-containing fluoro rubber,

a thermal crosslinking agent crosslinking the hydrogen-containing fluoro rubber when the uncrosslinked rubber composition is heated to a predetermined temperature,

a hydrogen site protective agent bonding to a carbon radical generated by applying radiation and breaking a carbon-hydrogen bond of the hydrogen-containing fluoro rubber, and

a crosslinking aid which bonds to the hydrogen-containing fluoro rubber so as to be interposed between molecules of the hydrogen-containing fluoro rubber when the hydrogen-containing fluoro rubber is crosslinked by the thermal crosslinking agent,

the hydrogen-containing fluoro rubber is a copolymer of vinylidene fluoride, hexafluoropropylene, and tetrafluoroethylene,

the thermal crosslinking agent is peroxide,

the hydrogen site protective agent is

a compound having a perfluoro skeleton having two or more vinyl groups

bonded to the carbon radical in a molecule and/or

a compound having a siloxane skeleton having two or more vinyl groups bonded to the carbon radical in a molecule,

the crosslinking aid is triallyl isocyanurate,

in the uncrosslinked rubber composition, content of the hydrogen site protective agent is 5 parts by mass or more and 15 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber,

in the uncrosslinked rubber composition, content of the thermal crosslinking agent is 0.5 parts by mass or more and 2.0 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber,

in the uncrosslinked rubber composition, content of the crosslinking aid is 2 parts by mass or more and 5 parts by mass or less with respect to 100 parts by mass of the hydrogen-containing fluoro rubber,

a ratio of content of the hydrogen site protective agent in the uncrosslinked rubber composition to content of the thermal crosslinking agent is 5.0 or more and 10 or less,

in the uncrosslinked rubber composition, a ratio of content of the crosslinking aid to content of the thermal crosslinking agent is 2.0 or more and 3.0 or less,

the sealing material is formed by a rubber composition in which

the hydrogen-containing fluoro rubber is crosslinked by the thermal crosslinking agent when the uncrosslinked rubber is heated a predetermined temperature, and then

the hydrogen site protective agent is bonded to the carbon generated after radiation is applied and the carbon-hydrogen bond of the hydrogen-containing fluoro rubber is broken.

9. A method of producing the sealing material of any of claims 1-8, comprising:

heating the uncrosslinked rubber composition to the predetermined temperature;

crosslinking the hydrogen-containing fluoro rubber by the thermal crosslinking agent; and then

bonding the hydrogen site protective agent to the carbon radical generated by applying radiation and breaking the carbon-hydrogen bond of the hydrogen-containing fluoro rubber.