

CLAIM(S)

1. A silicon-wafer processing fluid, the silicon-wafer processing fluid comprising:
a friction modifier comprising a nitrogen-containing compound, wherein
a pH of the nitrogen-containing compound is in a range from 2 to 8 when a mass
5 ratio with water represented by the nitrogen-containing compound/the water is 1/99.
2. The silicon-wafer processing fluid according to claim 1, wherein
the nitrogen-containing compound is a heterocyclic compound.
3. The silicon-wafer processing fluid according to claim 2, wherein
the heterocyclic compound is selected from the group consisting of benzotriazole,
10 3,4-dihydro-3-hydroxy-4-oxo-1,2,3-benzotriazine, indazole, benzimidazole and
derivatives thereof.
4. The silicon-wafer processing fluid according to any one of claims 1 to 3, wherein
a pH of the silicon-wafer processing fluid is in a range from 3 to 9.
5. The silicon-wafer processing fluid according to any one of claims 1 to 4, wherein
15 a content of the nitrogen-containing compound is in a range from 0.05 mass% to
10 mass% based on a total amount of the processing fluid.
6. The silicon-wafer processing fluid according to any one of claims 1 to 5, wherein
the silicon wafer processing fluid contains water in a range from 50 mass% to
99.95 mass% based on a total amount of the processing fluid.
- 20 7. The silicon-wafer processing fluid according to any one of claims 1 to 6, wherein
the silicon-wafer processing fluid is used for processing a silicon wafer with a
wire on which abrasive grains are rigidly attached.
8. A silicon-wafer processing method comprising:
using a silicon-wafer processing fluid containing a friction modifier comprising a
25 nitrogen-containing compound; and
processing the silicon wafer with a wire on which abrasive grains are rigidly
attached, wherein
a pH of the nitrogen-containing compound is in a range from 2 to 8 when a mass
ratio with water represented by the nitrogen-containing compound/the water is 1/99.

CLAIMS

[Claim 1]

A silicon-wafer processing fluid, the silicon-wafer processing fluid comprising:
a friction modifier comprising a nitrogen-containing compound, wherein
a pH of the nitrogen-containing compound is in a range from 2 to 8 when a mass ratio with water represented by the nitrogen-containing compound/the water is 1/99,
the silicon wafer processing fluid contains water in a range from 60 mass% to 99.95 mass% based on a total amount of the processing fluid, and
the silicon-wafer processing fluid is used for processing a silicon wafer with a wire on which abrasive grains are rigidly attached.

[Claim 2]

The silicon-wafer processing fluid according to claim 1, wherein
the nitrogen-containing compound is a heterocyclic compound.

[Claim 3]

The silicon-wafer processing fluid according to claim 2, wherein
the heterocyclic compound is selected from the group consisting of benzotriazole, 3,4-dihydro-3-hydroxy-4-oxo-1,2,3-benzotriazine, indazole, benzimidazole and derivatives thereof.

[Claim 4]

The silicon-wafer processing fluid according to any one of claims 1 to 3, wherein
a pH of the silicon-wafer processing fluid is in a range from 3 to 9.

[Claim 5]

The silicon-wafer processing fluid according to any one of claims 1 to 4, wherein
a content of the nitrogen-containing compound is in a range from 0.05 mass% to 10 mass% based on a total amount of the processing fluid.

[Claim 6]

A silicon-wafer processing method comprising:
using a silicon-wafer processing fluid containing a friction modifier comprising a nitrogen-containing compound; and
processing the silicon wafer with a wire on which abrasive grains are rigidly attached, wherein
a pH of the nitrogen-containing compound is in a range from 2 to 8 when a mass ratio with water represented by the nitrogen-containing compound/the water is 1/99, and
the silicon wafer processing fluid contains water in a range from 60 mass% to 99.95 mass% based on a total amount of the processing fluid.