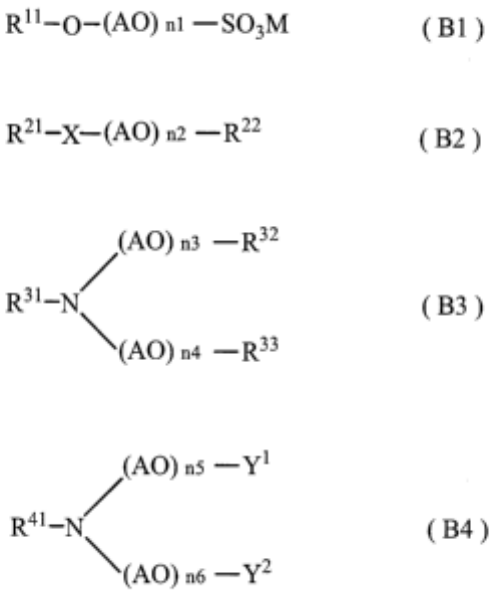
Claims

1. A dispersant composition for hydraulic compositions for centrifugal molding, comprising:
(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and
(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4), wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof,
[Chemical formula 1]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents

an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

2. The dispersant composition for hydraulic compositions for centrifugal molding according to Claim 1, wherein (A) is a dispersant for hydraulic powders composed of a high-molecular compound having an aromatic ring-containing monomer unit.

3. The dispersant composition for hydraulic compositions for centrifugal molding according to Claim 1 or 2, wherein a content ratio of (B) is 3 mass% or more and 60 mass% or less relative to a total content of (A) and (B).

4. The dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 3, wherein the composition contains, in a solid content thereof, (A) in an amount of 1 mass% or more and 99 mass% or less.

5. The dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 4, wherein the composition contains, in a solid content thereof, (B) in an amount of 2 mass% or more and 90 mass% or less.

6. The dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 5, wherein the composition is in the form of a liquid containing water, and the content of (A) in the composition is 1 mass% or more and 50 mass% or less.

7. The dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 6, wherein the composition is in the form of a liquid containing water, and the content of (B) in the composition is 1 mass% or more and 60 mass% or less.

8. The dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 7, further comprising (C) a polycarboxylic acid-based copolymer.

9. The dispersant composition for hydraulic compositions for centrifugal molding according to Claim 8, wherein a mass ratio of (C) to (A), (C)/(A), is over 0/100 and 50/50 or less.

10. The dispersant composition for hydraulic compositions for centrifugal molding according to Claim 8 or 9, wherein the composition contains, in the solid content thereof, (C) in an amount of 1 mass% or more and 30 mass% or less.

11. A hydraulic composition for centrifugal molding comprising the dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 10, a hydraulic powder, an aggregate and water, wherein a ratio of water/hydraulic powder is 10 mass% or more and 25 mass% or less.

12. The hydraulic composition for centrifugal molding according to Claim 11, wherein (A) is contained in an amount of 0.001 parts by mass or more and 5 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

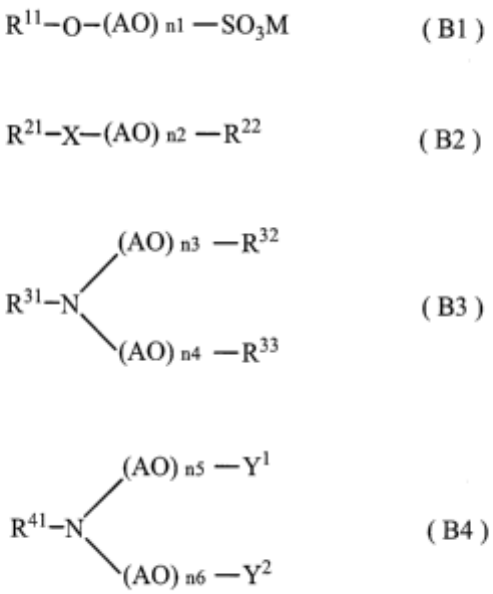
13. The hydraulic composition for centrifugal molding according to Claim 11 or 12, wherein (B) is contained in an amount of 0.0001 parts by mass or more and 5 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

14. The hydraulic composition for centrifugal molding according to any one of Claims 11 to 13, wherein the composition contains (A) and (B) in total in an amount of 0.1 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

15. A dispersant composition for hydraulic compositions for steam curing, comprising:
(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and
(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),
wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof, and a content ratio of (B)

is 1 mass% or more and 60 mass% or less relative to a total content of (A) and (B),

[Chemical Formula 2]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

16. The dispersant composition for hydraulic compositions for steam curing according to Claim 15, wherein, as (B), one or more compounds selected from compound (B1), compound (B2) and compound (B3) are contained.

17. The dispersant composition for hydraulic compositions for steam curing according to Claim 15 or 16, wherein the composition contains, in a solid content thereof, (A) in an amount of 1 mass% or more and 99 mass% or less.

18. The dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 17, wherein the composition contains, in the solid content thereof, (B) in an amount of 2 mass% or more and 90 mass% or less.

19. The dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 18, wherein the composition is in the form of a liquid containing water, and the content of (A) in the composition is 1 mass% or more and 50 mass% or less.

20. The dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 19, wherein the composition is in the form of a liquid containing water, and the content of (B) in the composition is 1 mass% or more and 60 mass% or less.

21. The dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 20, further comprising (C) a polycarboxylic acid-based copolymer.

22. The dispersant composition for hydraulic compositions for steam curing according to Claim 21, wherein a mass ratio of (C) to (A), (C)/(A), is over 0/100 and 50/50 or less.

23. The dispersant composition for hydraulic compositions for steam curing according to Claim 21 or 22, wherein the composition contains, in the solid content thereof, (C) in an amount of 1 mass% or more and 30 mass% or less.

24. A hydraulic composition for steam curing comprising the dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 23, a hydraulic powder, an aggregate and water, wherein a ratio of water/hydraulic powder is 10 mass% or more and 53 mass% or less, and a total content of (A) and (B) is 0.25 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

25. The hydraulic composition for steam curing according to Claim 24, wherein (A) is contained in an amount of 0.15 parts by mass or more and 9.9 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

26. The hydraulic composition for steam curing according to Claim 24 or 25, wherein (B) is contained in an amount of 0.0025 parts by mass or more and 6 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

27. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:
step 1: mixing water, a hydraulic powder, an aggregate and the dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 10 to prepare a hydraulic composition having a water/hydraulic powder ratio of 10 mass% or more and 25 mass% or less;
step 2: filling the hydraulic composition obtained in step 1 into a mold;

step 3: compacting the hydraulic composition filled into the mold in step 2 by applying a centrifugal force; and step 4: setting, in the mold, the hydraulic composition compacted in step 3.

28. The method for producing a hardened product of a hydraulic composition according to Claim 27, comprising the following step 5 after step 4,
step 5: steam curing, in the mold, the hydraulic composition set in step 4.

29. The method for producing a hardened product of a hydraulic composition according to Claim 27 or 28, wherein, in step 1, the dispersant composition for hydraulic compositions for centrifugal molding is mixed so that a total mixing amount of (A) and (B) is 0.1 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

30. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:
step 1': mixing water, a hydraulic powder, an aggregate and the dispersant composition for hydraulic compositions for steam curing according to any one of

Claims 15 to 23 to prepare a hydraulic composition having a water/hydraulic powder ratio of 10 mass% or more and 53 mass% or less, wherein the dispersant composition for hydraulic compositions for steam curing is mixed so that a ratio of a mixing amount of (B) is 1 mass% or more and 60 mass% or less relative to a total mixing amount of (A) and (B) and the total mixing amount of (A) and (B) is 0.25 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder;

step 2': filling the hydraulic composition obtained in step 1' into a mold; and

step 5': steam curing, in the mold, the hydraulic composition filled into the mold in step 2'.

31. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:

step 1: mixing water, a hydraulic powder, the following (A), the following (B) and an aggregate to prepare a hydraulic composition for centrifugal molding having a water/hydraulic powder ratio of 10 mass% or more and 25 mass% or less, wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof;

step 2: filling the hydraulic composition obtained in step 1 into a mold;

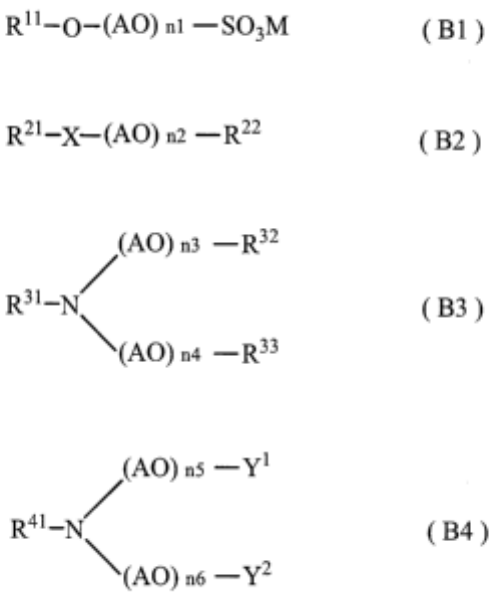
step 3: compacting the hydraulic composition filled into the mold in step 2 by applying a centrifugal force; and

step 4: setting, in the mold, the hydraulic composition compacted in step 3,

(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and

(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),

[Chemical Formula 3]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents

an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

32. The method for producing a hardened product of a hydraulic composition according to Claim 31, comprising the following step 5 after step 4,
step 5: steam curing, in the mold, the hydraulic composition set in step 4.

33. The method for producing a hardened product of a hydraulic composition according to Claim 31 or 32, wherein, in step 1, (A) and (B) are mixed so that a ratio of a mixing amount of (B) is 3 mass% or more and 60 mass% or less relative to a total mixing amount of (A) and (B) and the total mixing amount of (A) and (B) is 0.1 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

34. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:

step 1': mixing water, a hydraulic powder, the following (A), the following (B) and an aggregate to prepare a hydraulic composition for steam curing having a water/hydraulic powder ratio of 10 mass% or more and 53 mass% or less, wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof, (A) and (B) are mixed so that a ratio of a mixing amount of (B) is 1 mass% or more and 60 mass% or less relative to a total mixing amount of (A) and (B) and the total mixing amount of (A) and (B) is 0.25 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder;

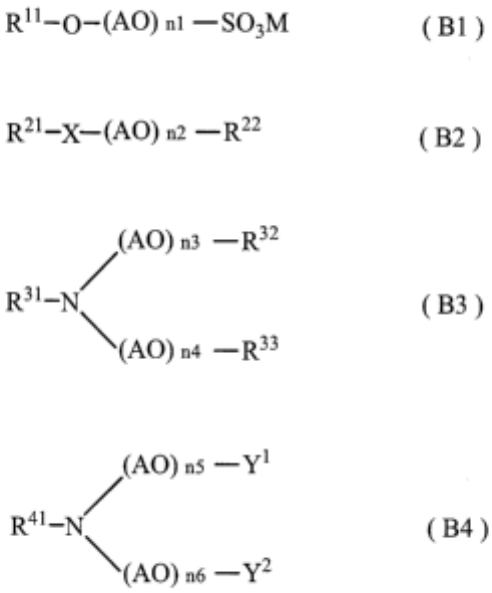
step 2': filling the hydraulic composition obtained in step 1' into a mold; and

step 5': steam curing, in the mold, the hydraulic composition filled into the mold in step 2'

(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and

(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),

[Chemical Formula 4]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

35. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:

step 1: mixing water, a hydraulic powder, the following (A), the following (B), the following (C) and an aggregate to prepare a hydraulic composition having a water/hydraulic powder ratio of 10 mass% or more and 25

mass% or less, wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof;

step 2: filling the hydraulic composition obtained in step 1 into a mold;

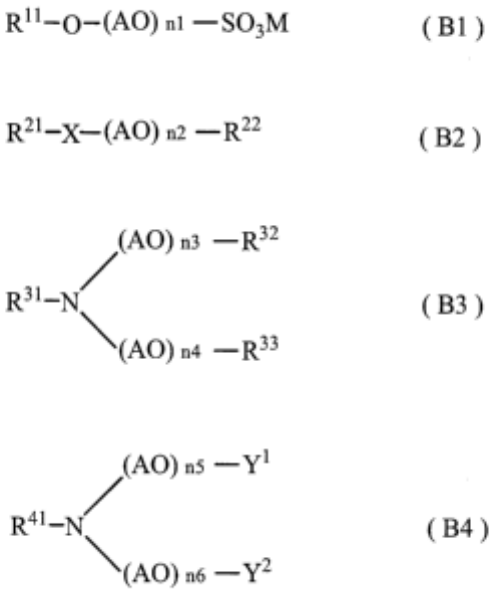
step 3: compacting the hydraulic composition filled into the mold in step 2 by applying a centrifugal force; and

step 4: setting, in the mold, the hydraulic composition compacted in step 3,

(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and

(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),

[Chemical Formula 5]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion; and

(C): a polycarboxylic acid-based copolymer.

36. The method for producing a hardened product of a hydraulic composition according to Claim 35, comprising the following step 5 after step 4,

step 5: steam curing, in the mold, the hydraulic composition set in step 4.

37. The method for producing a hardened product of a hydraulic composition according to Claim 35 or 36, wherein, in step 1, (A) and (B) are mixed so that a ratio of a mixing amount of (B) is 3 mass% or more and 60 mass% or less relative to a total mixing amount of (A) and (B) and the total mixing amount of (A) and (B) is 0.1 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.

38. The method for producing a hardened product of a hydraulic composition according to any one of Claims 35 to 37, wherein, in step 1, the dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 8 to 10 is used.

39. The method for producing a hardened product of a hydraulic composition according to any one of Claims 35 to 38, wherein, in step 1, (A) and (C) are mixed so that a mass ratio of (C) to (A), (C)/(A), is over 0/100 and 50/50 or less.

40. A method for producing a hardened product of a hydraulic composition, the method comprising the steps of:

step 1': mixing water, a hydraulic powder, the following (A), the following (B), the following (C) and an aggregate to prepare a hydraulic composition having a water/hydraulic powder ratio of 10 mass% or more and 53 mass% or less, wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof, (A) and (B) are mixed so that a ratio of a mixing amount of (B) is 1 mass% or more and 60 mass% or less relative to a total mixing amount of (A) and (B) and the total mixing amount of (A) and (B) is 0.25 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder;

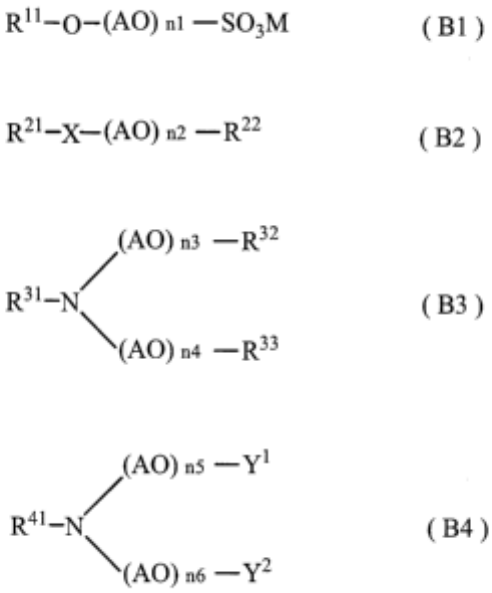
step 2': filling the hydraulic composition obtained in step 1' into a mold; and

step 5': steam curing, in the mold, the hydraulic composition filled into the mold in step 2',

(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and

(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),

[Chemical Formula 6]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion; and

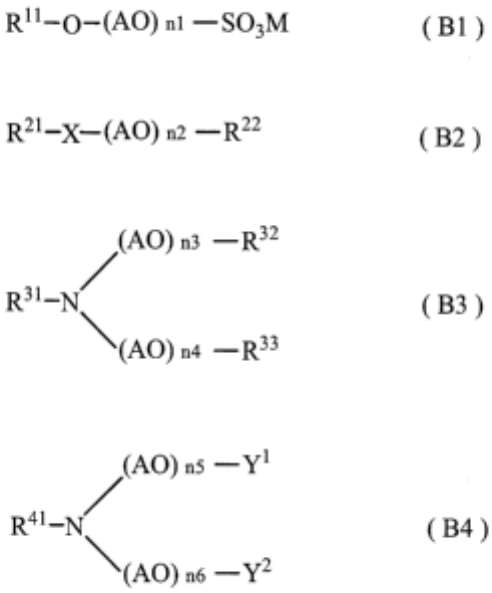
(C): a polycarboxylic acid-based copolymer.

41. The method for producing a hardened product of a hydraulic composition according to Claim 40, wherein, in step 1, the dispersant composition for hydraulic compositions for steam curing according to any one of Claims 21 to 23 is used.

42. The method for producing a hardened product of a hydraulic composition according to Claim 40 or 41, wherein, in step 1, (A) and (C) are mixed so that a mass ratio of (C) to (A), (C)/(A), is over 0/100 and 50/50 or less.

43. Use of a composition as a dispersant for hydraulic compositions for centrifugal molding, the composition comprising:
(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and
(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4), wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof,

[Chemical Formula 7]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

44. Use according to Claim 43, wherein the composition has a content ratio of (B) relative to a total content of (A) and (B) of 3 mass% or more and 60 mass% or less.

45. Use according to Claim 43 or 44, wherein the composition contains, in a solid content thereof, (A) in an amount of 1 mass% or more and 99 mass% or less.

46. Use according to any one of Claims 43 to 45, wherein the composition contains, in the solid content thereof, (B) in an amount of 2 mass% or more and 90 mass% or less.

47. Use according to any one of Claims 43 to 46, wherein the composition is in the form of a liquid containing water, and the content of (A) in the composition is 1 mass% or more and 50 mass% or less.

48. Use according to any one of Claims 43 to 47, wherein the composition is in the form of a liquid containing water, and the content of (B) in the composition is 1 mass% or more and 60 mass% or less.

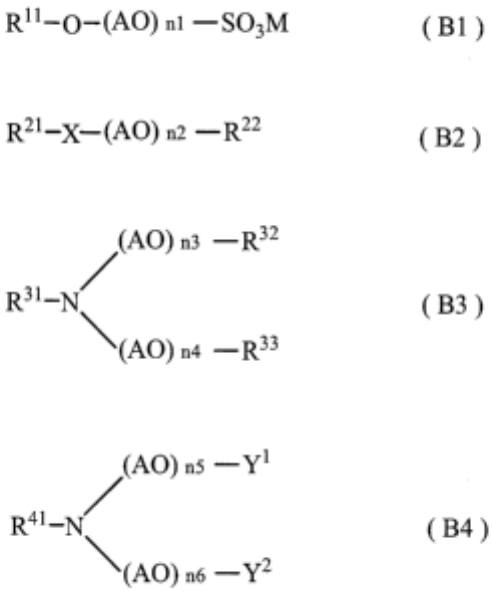
49. Use according to any one of Claims 43 to 48, wherein the composition further contains (C) a polycarboxylic acid-based copolymer.

50. Use according to Claim 49, wherein the composition has a mass ratio of (C) to (A), (C)/(A), of over 0/100 and 50/50 or less.

51. Use according to Claim 49 or 50, wherein the composition contains, in the solid content thereof, (C) in an amount of 1 mass% or more and 30 mass% or less.

52. Use of a composition as a dispersant for hydraulic compositions for steam curing, the composition comprising:
(A) a dispersant for hydraulic powders composed of an aromatic ring-containing high-molecular compound; and
(B) one or more compounds selected from compounds represented by the following general formula (B1), compounds represented by the following general formula (B2), compounds represented by the following general formula (B3) and compounds represented by the following general formula (B4),
wherein (A) is a formaldehyde naphthalenesulfonate condensate or a salt thereof, and a content ratio of (B) is 1 mass% or more and 60 mass% or less relative to a total content of (A) and (B),

[Chemical Formula 8]



wherein

R^{11}, R^{21}, R^{31} and R^{41} each independently represent a hydrocarbon group having a carbon number of 4 or more and 27 or less;

R^{22} represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

R^{32} and R^{33} are the same or different, and each represents a hydrogen atom or an alkyl group having a carbon number of 1 or more and 3 or less;

X represents O or COO;

AO represents an alkyleneoxy group having a carbon number of 2 or more and 4 or less;

n_1 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_2 represents an average number of moles of added AO and is 1 or more and 200 or less;

n_3 and n_4 are the same or different, and each represents an average number of moles of added AO and is 0 or more, and the total of n_3 and n_4 is 1 or more and 200 or less;

Y^1 and Y^2 are the same or different, and each represents a hydrogen atom or SO_3M, and at least one of Y^1 and Y^2 is SO_3M;

n_5 and n_6 are the same or different; each represents an average number of moles of added AO and is 0 or more; the total of n_5 and n_6 is 1 or more and 200 or less; when n_5 is 0, Y^1 is a hydrogen atom; and when n_6 is 0, Y^2 is a hydrogen atom; and

M is a counter ion.

53. Use according to Claim 52, wherein the composition contains, in a solid content thereof, (A) in an amount of 1 mass% or more and 99 mass% or less.

54. Use according to Claim 52 or 53, wherein the composition contains, in the solid content thereof, (B) in an amount of 2 mass% or more and 90 mass% or less.

55. Use according to any one of Claims 52 to 54, wherein the composition is in the form of a liquid containing water, and the content of (A) in the composition is 1 mass% or more and 50 mass% or less.

56. Use according to any one of Claims 52 to 55, wherein the composition is in the form of a liquid containing water, and the content of (B) in the composition is 1 mass% or more and 60 mass% or less.

57. Use according to any one of Claims 52 to 56, wherein the composition further contains (C) a polycarboxylic acid-based copolymer.

58. Use according to Claim 57, wherein the composition has a mass ratio of (C) to (A), (C)/(A), of over 0/100 and 50/50 or less.

59. Use according to Claim 57 or 58, wherein the composition contains, in the solid content thereof, (C) in an amount of 1 mass% or more and 30 mass% or less.

60. Use of a composition as a hydraulic composition for centrifugal molding, the composition comprising a

dispersant composition for hydraulic compositions for centrifugal molding according to any one of Claims 1 to 10, a hydraulic powder, an aggregate and water, wherein a water/hydraulic powder ratio is 10 mass% or more and 25 mass% or less.

61. Use of a composition as a hydraulic composition for steam curing, the composition comprising a dispersant composition for hydraulic compositions for steam curing according to any one of Claims 15 to 23, a hydraulic powder, an aggregate and water, wherein a water/hydraulic powder ratio is 10 mass% or more and 53 mass% or less and a total content of (A) and (B) is 0.25 parts by mass or more and 10 parts by mass or less relative to 100 parts by mass of the hydraulic powder.