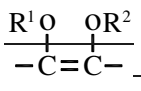
WHAT IS CLAIMED IS

1. A gypsum board composition, comprising:

gypsum and an anti-deformation additive,

wherein the anti-deformation additive comprises a compound, ~~comprising a group shown in chemical formula (1):~~



~~(1),~~

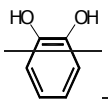
~~and the compound comprises no carboxylate groups,~~

~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl group.~~

~~2. The composition according to claim 1,~~ wherein the compound comprises at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative ~~and~~ , ascorbate, tannic acid and Benzene-1,2,3-triol.

~~3~~2. The composition according to claim ~~2~~1, wherein the ascorbic acid derivative comprises at least one selected from a group consisting of L-Ascorbyl 6-palmitate and L-Ascorbyl stearate.

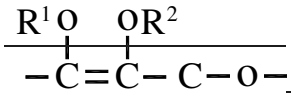
~~4~~3. The composition according to claim ~~2~~1, wherein the ascorbate is calcium ascorbate.~~5The composition according to claim 1, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (2):~~



~~(2).~~

~~6. The composition according to claim 5, wherein the compound comprising the group shown in chemical formula (2) is tannic acid or Benzene-1,2,3-triol.The composition according to claim 1, wherein the compound comprising the group shown in chemical formula (1) comprises a group~~

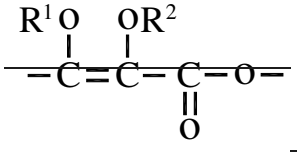
~~shown in chemical formula (3):~~



~~(3);~~

~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl group~~

~~8. The composition according to claim 1, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (4):~~



~~(4);~~

~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl group.~~

~~9~~4. The composition according to any of claims 1 to ~~8~~3, wherein a mass percentage of the compound to the gypsum ranges from 0.01% to 5%.

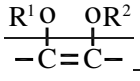
~~10~~5. A method for forming a composition, comprising:

mixing gypsum powder and an anti-deformation additive with water; and

stirring the mixture,

wherein the anti-deformation additive comprises a compound, ~~–~~wherein the compound comprises at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative, ascorbate, tannic acid and Benzene-1,2,3-triol.

~~comprising a group shown in chemical formula (1):~~



~~(1),~~

~~and the compound comprises no carboxylate groups,~~

~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl~~

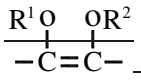
~~group.~~

~~11~~6. The method according to claim ~~10~~5, wherein a mass percentage of the compound to the gypsum powder ranges from 0.01% to 5.0%.

~~12~~7. A gypsum board, comprising:

gypsum, starch, dispersant, accelerator, an anti-deformation additive, and optionally foaming agent,

wherein the anti-deformation additive comprises a compound, ~~comprising a group shown in chemical formula (1):~~



~~chemical formula (1),~~

~~and the compound comprises no carboxylate groups;~~

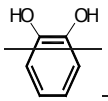
~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl group.~~

~~13. The gypsum board according to claim 12,~~ wherein the compound comprises at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative ~~and ascorbate~~ ascorbate, tannic acid and Benzene-1,2,3-triol.

~~14~~8. The gypsum board according to claim ~~13~~7, wherein the ascorbic acid derivative comprises at least one selected from a group consisting of L-Ascorbyl 6-palmitate and L-Ascorbyl stearate.

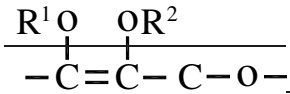
~~15~~9. The gypsum board according to claim ~~13~~7, wherein the ascorbate is calcium ascorbate.

~~16The gypsum board according to claim 12, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (2):~~



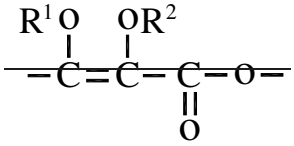
~~(2).~~

~~17. The gypsum board according to claim 16, wherein the compound comprising the group shown in chemical formula (2) is tannic acid or Benzene-1,2,3-triol.The gypsum board according to claim 12, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (3):~~



~~(3).~~

~~19. The gypsum board according to claim 12, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (4):~~



~~(4).20~~10. The gypsum board according to claim ~~12~~7, wherein the gypsum product is a gypsum board which is wrapped by a liner.

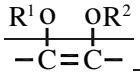
~~21~~11. The gypsum board according to claim ~~20~~10, wherein the liner are paper sheet, non-woven mat comprising of polymeric and/or glass fibers and the like.

~~22~~12. The gypsum board according to any of claims ~~12~~ 7 to ~~21~~11, wherein a mass percentage of the compound to the gypsum ranges from 0.01% to 5.0%.

~~23~~13. A method for forming a gypsum board, comprising:

mixing gypsum, water, starch, an accelerator, a dispersant, an anti-deformation additive, and optionally a foaming agent,

wherein the anti-deformation additive comprises a compound, wherein the compound comprises at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative, ascorbate, tannic acid and Benzene-1,2,3-triol~~comprising a group shown in chemical formula (1):~~



~~(1),~~

~~and the compound comprises no carboxylate groups;~~

~~wherein the R^1 and/or R^2 is hydrogen or metal ion or alkyl group or alkoxy group or alkenyl group~~;

stirring the mixture to form a slurry;

disposing the slurry between two liners to form a sandwich structures;

forming a first board based on the sandwich structure;

cutting the first board into a plurality of second boards with desired lengths after a hardening process;

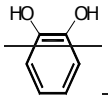
drying the plurality of second boards to evaporate excess water.

~~24. The method according to claim 23, wherein the compound comprises at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative and ascorbate.~~

~~25~~14. The method according to claim ~~24~~13, wherein the ascorbic acid derivative comprises at least one selected from a group consisting of L-Ascorbyl 6-palmitate and L-Ascorbyl stearate.

~~26~~15. The method according to claim ~~24~~13, wherein the ascorbate is calcium ascorbate.

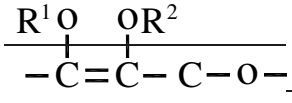
~~27. The method according to claim 23, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (2):~~



~~(2).~~

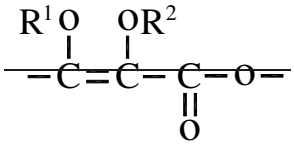
~~28. The method according to claim 27, wherein the compound comprising the group shown in chemical formula (2) is tannic acid or Benzene-1,2,3-triol.~~

~~29. The method according to claim 23, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (3):~~



~~(3).~~

~~30. The method according to claim 23, wherein the compound comprising the group shown in chemical formula (1) comprises a group shown in chemical formula (4):~~

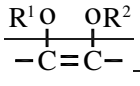


~~(4).~~

~~31~~16. The method according to any of claims ~~23~~ 13 to ~~30~~15, wherein a mass percentage of the compound to the gypsum ranges from 0.01% to 5.0%.

~~32~~17. A method for using a compound which comprises ~~a group~~ at least one selected from a group consisting of ascorbic acid, ascorbic acid derivative, ascorbate, tannic acid and Benzene-1,2,3-triol,

~~shown in chemical formula (1):~~



~~(1),~~

~~and comprises no carboxylate groups,~~

wherein the compound is used as an anti-sagging additive in a gypsum product.

~~33~~18. A method for using ascorbic acid, wherein the ascorbic acid is used as an anti-sagging additive in a gypsum product.