What is claimed is:

1. A growing media wetting composition comprising (a) at least one non-ionic alkylene oxide copolymer and (b) at least one terpenic alkoxylate,
wherein the non-ionic alkylene oxide block copolymer molecule (a) comprises at least one copolymer represented by the formula (I)

$$R_1\text{-}O\text{-}(CH_2CH_2O)_x(CH(CH_3)CH_2O)_y(CH_2CH_2O)_z\text{-}R_2 \qquad (I)$$

wherein R_1 and R_2 are independently selected from hydrogen and linear or branched C_1-C_8 alkyl; and wherein the values of x, y and z are each other than zero and the sum of x, y and z is chosen so that there is from 10 to 80% of ethylene oxide (EO) present in the copolymer,
wherein the terpenic alkoxylate (b) comprises at least one terpenic alkoxylate selected from a compound of the formula (II):

$$R_3\text{-}O\text{-}(CH(R_4)CH_2O)_n\text{-}(CH(R_4)CH_2O)_m\text{-}R_5 \qquad (II)$$

wherein R_3 is a terpenic moiety selected from the group consisting of terpenic carbides, oxidized derivatives of terpenic carbides, terpenic alcohols, terpenic aldehydes and terpenic ketones, and mixtures thereof; R_4 is selected from hydrogen and methyl; R_5 is selected from hydrogen and linear or branched C_1-C_8 alkyl; and where n and m are each other than zero and the sum of n and m is chosen so that there are from 2 to 10 propylene oxide units and from 5 to 25 ethylene oxide units,
and wherein the ratio (% wt/v) of a) to b) is from 90:10 to 60:40.

2. The growing media wetting composition of claim 1, where the number average molecular weight of the non-ionic alkylene oxide block copolymer molecule (a) is from 1000 to 6500.

3. The growing media wetting composition of claim 1, wherein the sum of x, y and z is chosen so that there is from 10 to 50% of ethylene oxide (EO) present in the copolymer.

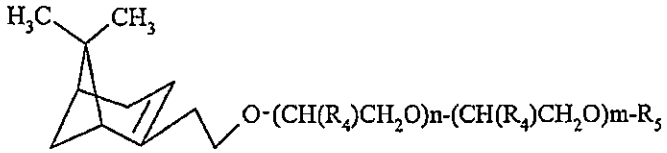
4. The growing media wetting composition of claim 1, wherein the terpenic alkoxylate (b) comprises at least one terpenic alkoxylate is a compound of the formulae (IIa) or (IIb):

$$R_3\text{-}PO_n\text{-}EO_m\text{-}R_5 \qquad (IIa)$$

R_3-EO_n-PO_m-R_5 (IIb)

wherein the sum of n and m is chosen so that there are from 3 to 7 propylene oxide units and from 5 to 15 ethylene oxide units.

5. The growing media wetting composition of claim 1, wherein the terpenic alkoxylate (b) is a Nopol alkoxylate of the formula (IId)



(IId)

wherein R_4 is selected from hydrogen and methyl; R_5 is selected from hydrogen and linear or branched C_1-C_8 alkyl; and where n and m are each other than zero and the sum of n and m is chosen so that there are from 2 to 10 propylene oxide units and from 5 to 25 ethylene oxide units.

6. The growing media wetting composition of claim 1, which further comprises (c) a diluents selected from aliphatic alcohols and adducts thereof with alkylene oxides.

7. The growing media wetting composition of claim 1, wherein the ratio (% wt/v) of a) to b)+c) is from 90:10 to 80:20.

8. A method of enhancing plant growth in a plant growth media by contacting the plants, parts of plants, seeds, their locus of growth or the plant growth media with an effective amount of a wetting composition according to claim 1.

9. A method of reducing the development of dry patch at a locus selected from soil or turf grass by contacting the locus with an effective amount of a wetting composition according to claim 1.

10. A method of reducing the hydrophobicity of plant growth media which comprises the application an effective amount of a wetting composition according to claim 1 to the plant growth media.

11. A method of enhancing the bio-efficacy or bio-availability of at least one agrochemical said method comprising applying the agrochemical to plants, parts of plants, seeds, or at their locus of growth in any desired sequence, including simultaneously, separately, or in succession with a wetting composition according to claim 1 in an amount effective to enhance the bio-efficacy or bio-availability of said at least one agrochemical.

12. The method of claim 11, wherein the agrochemical is selected from a pesticide, a growth regulator and a fertilizer.

Claims

1. A growing media wetting composition comprising (a) at least one non-ionic alkylene oxide copolymer and (b) at least one terpenic alkoxylate, wherein the non-ionic alkylene oxide block copolymer molecule (a) comprises at least one copolymer represented by the formula (I)

$$R_1\text{-}O\text{-}(CH_2CH_2O)_x(CH(CH_3)CH_2O)_y(CH_2CH_2O)_z\text{-}R_2 \qquad (I)$$

wherein R_1 and R_2 are independently selected from hydrogen and linear or branched C_1-C_8 alkyl; and wherein the values of x, y and z are each other than zero and the sum of x, y and z is chosen so that there is from 10 to 80% of ethylene oxide (EO) present in the copolymer,

wherein the terpenic alkoxylate (b) comprises at least one terpenic alkoxylate selected from a compound of the formula (II):

$$R_3\text{-}O\text{-}(CH(R_4)CH_2O)_n\text{-}(CH(R_4)CH_2O)_m\text{-}R_5 \qquad (II)$$

wherein R_3 is a terpenic moiety selected from the group consisting of terpenic carbides, oxidized derivatives of terpenic carbides, terpenic alcohols, terpenic aldehydes and terpenic ketones, and mixtures thereof; R_4 is selected from hydrogen and methyl; R_5 is selected from hydrogen and linear or branched C_1-C_8 alkyl; and where n and m are each other than zero and the sum of n and m is chosen so that there are from 2 to 10 propylene oxide units and from 5 to 25 ethylene oxide units, and wherein the ratio (% wt/v) of a) to b) is from 90:10 to 60:40.

2. The growing media wetting composition of claim 1, where the number average molecular weight of the non-ionic alkylene oxide block copolymer molecule (a) is from 1000 to 6500.

3. The growing media wetting composition of claim 1, wherein the sum of x, y and z is chosen so that there is from 10 to 50% of ethylene oxide (EO) present in the copolymer.

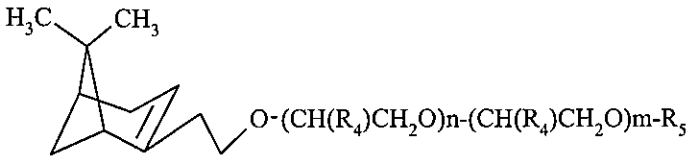
4. The growing media wetting composition of claim 1, wherein the terpenic alkoxylate (b) comprises at least one terpenic alkoxylate is a compound of the formulae (IIa) or (IIb):

$$R_3\text{-}O\text{-}PO_n\text{-}EO_m\text{-}R_5 \qquad (IIa)$$

R_3- O-EO_n-PO_m-R_5 (IIb)

wherein the sum of n and m is chosen so that there are from 3 to 7 propylene oxide units and from 5 to 15 ethylene oxide units.

5. The growing media wetting composition of claim 1, wherein the terpenic alkoxylate (b) is a Nopol alkoxylate of the formula (IId)



(IId)

wherein R_4 is selected from hydrogen and methyl; R_5 is selected from hydrogen and linear or branched C_1-C_8 alkyl; and where n and m are each other than zero and the sum of n and m is chosen so that there are from 2 to 10 propylene oxide units and from 5 to 25 ethylene oxide units.

6. The growing media wetting composition of claim 1, which further comprises (c) a diluents selected from aliphatic alcohols and adducts thereof with alkylene oxides.

7. The growing media wetting composition of claim 1, wherein the ratio (% wt/v) of a) to b)+c) is from 90:10 to 80:20.

8. A method of enhancing plant growth in a plant growth media by contacting the plants, parts of plants, seeds, their locus of growth or the plant growth media with an effective amount of a wetting composition according to claim 1.

9. A method of reducing the development of dry patch at a locus selected from soil or turf grass by contacting the locus with an effective amount of a wetting composition according to claim 1.

10. A method of reducing the hydrophobicity of plant growth media which comprises the application an effective amount of a wetting composition according to claim 1 to the plant growth media.

11. A method of enhancing the bio-efficacy or bio-availability of at least one agro-

ochemical said method comprising applying the agrochemical to plants, parts of plants, seeds, or at their locus of growth in any desired sequence, including simultaneously, separately, or in succession with a wetting composition according to claim 1 in an amount effective to enhance the bio-efficacy or bio-availability of said at least one agrochemical.

12. The method of claim 11, wherein the agrochemical is selected from a pesticide, a growth regulator and a fertilizer.