[0011] The alkoxylation processes described in the two documents WO 2009/000852 and WO 2012/005897 as mentioned above are moreover performed according to this method.

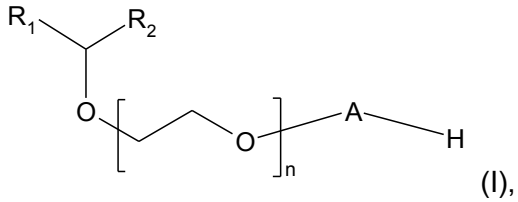
[0012] It is also acknowledged that secondary alcohols have low reactivity when compared with primary alcohols. As a result, the industrialization of products obtained by alkoxylating secondary alcohols has never been reasonably envisaged.

[0013] In addition, at a time when the environmental challenges are truly high, it is interesting to envisage using a biobased or biodegradable reagent having a good ecotoxicological profile.

[0014] Thus, an alkoxylated, short-chain secondary alcohol is sought, the alkoxylation of which is performed via a simple process that allows low-cost industrial and commercial development. It would also be advantageous to develop alkoxylated secondary alcohols, the starting compound of which is a biobased and biodegradable reagent.

[0015] One object of the examples disclosed herein is to propose a solution for resolving the problems mentioned above.

[0016] In an aspect, there is provided a compound of formula (I) below:



(I),

in which:

- the groups R_1 and R_2, which may be identical or different, represent, independently of each other, a linear, branched or cyclic, saturated or unsaturated hydrocarbon-based group, comprising from 1 to 6 carbon atoms, it being understood that the sum of the carbon atoms of the groups R_1 and R_2 ranges from 2 to 7, the groups R_1 and R_2 may also form, together with the carbon atom that bears them, a 6-, 7- or 8-membered ring,
- n is an integer between, limits inclusive, 1 and 100, preferably between 2 and 100, more preferably between 3 and 100, particularly between 4 and 100, more particularly between 5 and 100, preferably between 6 and 100, more preferably between 7 and 100, preferably between 8 and 100, more preferably between 9 and 100 and very preferably between 10 and 100.
- A represents a sequence of one or more units chosen from ethylene oxide, propylene oxide and butylene oxide units, and mixtures thereof,
- the group formed by R_1, R_2 and the carbon atom to which R_1 and R_2 are attached has a degree of branching equal to 0, 1 or 2.

[0017] A subject of the present disclosure is also a process for preparing the compound of formula (I) according to the disclosure.

[0017a] In an aspect, there is provided a process for preparing a compound of formula (I) as defined above, comprising the following successive steps:

(a) reacting a secondary alcohol of formula (II) below: $R_1CH(OH)R_2$ (II), in which R_1 and R_2 are as defined above, with n ethylene oxide(s), where n is as defined above, in the presence of at least one catalyst of dimetallic cyanide type;

(b) reacting the product obtained from step (a) with one or more oxides chosen from ethylene oxide, propylene oxide and butylene oxide, and mixtures thereof, in the presence of at least one catalyst of dimetallic cyanide type.

[0018] In another aspect, there is provided the use of a catalyst of dimetallic cyanide (DMC) type for performing the alkoxylation of 2-octanol.

[0019] A subject of the disclosure is also the use of the compound of formula (I) according to the disclosure , as nonionic surfactant, low-foaming surfactant, wetting agent, foaming agent, hydrotrope, detergent, solvent, reactive solvent, coalescer, compatibilizer, emulsifying agent, dispersant, chemical intermediary, corrosion inhibitor, demulcent, plasticizer, sequestrants, mineral deposition inhibitor, ionic liquid, stabilizer, lubricant, bitumen additive, deinking additive, oil gellant, ore flotation collector, processing aid in the manufacture of plastics, antistatic agent, fertilizer coating additive, for plant protection, for treating textiles and for enhanced oil recovery, for the production of electrodes and electrolytes for batteries.

[0019a] In another aspect, there is provided a composition comprising at least one compound of formula (I) as defined above, and one or more aqueous, organic or aqueous-organic solvents, optionally with one or more additives and fillers.

[0020] Other advantages and characteristics of the disclosure will become more clearly apparent on examining the detailed description.

[0021] It is specified that the expression "from … to …" used in the present description should be understood as including each of the limits mentioned.

[0022] For the purposes of the present invention, the term "ethylene oxide unit" refers to a unit derived from ethylene oxide after opening of the oxirane ring. For the purposes of the present invention, the term "propylene oxide unit" refers to a unit derived from propylene oxide after opening of the oxirane ring. For the purposes of the present invention, the term "butylene oxide unit" refers to a unit derived from butylene oxide after opening of the oxirane ring.

[0023] The compound according to the invention is of formula (I) as mentioned above.

[0024] In other words, the groups R_1 and R_2, and the carbon atom to which they are attached, denote a C3-C8, preferably C4-C8, more particularly C5-C8, preferably C6-C8, secondary radical.

[0025] Preferably, the groups R_1 and R_2, which may be identical or different, represent, independently of each other, methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, pentyl or hexyl.

[0026] Preferably, the group formed by R_1, R_2 and the carbon atom to which R_1 and R_2 are attached is chosen from the 2-octyl radical and the 4-methyl-2-pentyl radical. More particularly, the group formed by R_1, R_2 and the carbon atom to which R_1 and R_2 are attached is the 2-octyl radical.

[0027] Advantageously, n is between, limits inclusive, 1 and 75, preferably between 2 and 75, more preferably between 3 and 75, particularly between 4 and 75, more