Claims:

1. Aqueous alkaline cleaner solution for glass filler removal comprising:

   (a) at least one surfactant selected from the group consisting of saturated branched or unbranched C5 to C12 carboxylic acid or salt thereof, wherein the concentration of the (a) at least one surfactant is from 0.9 to 1.7 g/L;
   (b) at least one surfactant selected from the group consisting of saturated branched or unbranched C5 to C12 alkyl having a negatively charged group selected from sulfate, sulfite, sulfonate phosphate, phosphite and carbonate, and saturated C3-C8 alkyl amino carboxylate;
   (c) at least one compound having at least one hydroxyl group and at least one C-O-C group selected from the group consisting of alkoxylated C5-C12 alkanol and glycosidic C5-C12 alkanol; and
   (d) alkali metal hydroxide, wherein the concentration of the (d) alkali metal hydroxide is from 65 to 200 g/L.

2. Aqueous alkaline cleaner solution according to claim 1 wherein the concentration of the (a) at least one surfactant is from 1.0 to 1.5 g/L, preferably from 1.2 to 1.4 g/L.

3. Aqueous alkaline cleaner solution according to claim 1 or 2 wherein the concentration of the (b) at least one surfactant is from 0.5 to 10 g/L.

4. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the concentration of the (c) at least one compound is from 0.6 to 1.3 g/L, preferably from 0.65 to 1.2 g/L more preferably from 0.7 to 1.1 g/L.

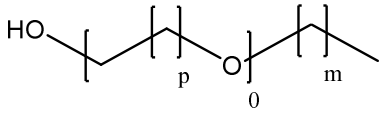
5. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the concentration of the (d) alkali metal hydroxide is from 70 to 100 g/L, preferably from 75 to 80 g/L.

6. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the (a) at least one surfactant is selected from the group consisting of saturated branched

C6 to C10 carboxylic acid or salt, preferable unsubstituted hexanoic acid, octanoic acid and decanoic acid.

7. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the (b) at least one surfactant is selected from the group consisting of saturated branched or unbranched C5 to C8 alkyl having a negatively charged group of sulfate, phosphate and carbonate, and saturated C5-C8 alkyl amine carboxylate, preferably 1-amino-(C5-C8)-alkyl carboxylate.

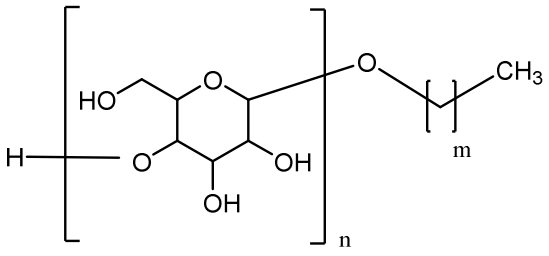
8. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the (c) at least one compound is an alkoxylated C5-C12 alkanol of formula (I)




(I)

wherein p is an integer from 1 to 2, o is an integer from 4 to 10 and m is an integer from 4 to 9

and wherein the (c) at least one compound is a glycosidic C5-C12 alkanol of formula (II)




(II)

wherein n is an integer from 1 to 5 and m is an integer from 4 to 9.

9. Aqueous alkaline cleaner solution according to one of the preceding claims wherein the solution comprises (e) at least one water-soluble alkanolamine, selected from the group consisting of monoethanolamine (MEA), diethanolamine (DEA) and triethanolamine (TEA), preferably 2-aminoethanol.

10. Aqueous alkaline cleaner solution according to claim 9 wherein the concentration of the (e) at least one water-soluble alkanolamine is from 6.5 to 9.0 g/L, preferably from 7.5 to 8.5 g/L, more preferably from 7.8 to 8.2 g/L.

11. Method for glass filler removal treatment of a desmear treated substrate comprising a nonconductive layer basing on a composite of organic polymers and glass filler and a copper layer attached to the nonconductive layer in manufacturing an article with an integrated circuit, wherein the nonconductive layer has at least one blind micro via within the surface of the nonconductive layer, wherein the bottom of the at least one micro via is built by the attached copper layer, wherein the surface of the nonconductive layer which is not attached to the copper layer and the wall of the at least one blind micro via expose desmear treated organic polymers and glass filler, wherein the method comprising the steps in the following order:
(i) providing the desmear treated substrate;
(ii) providing the aqueous alkaline cleaner solution according to one of the claims 1 to 10;
(iii) treating the substrate with the aqueous alkaline cleaner solution by bringing the substrate into contact with the alkaline cleaner solution in order to remove glass filler from the organic polymer.

12. Method of claim 11, wherein the (iii) treating is conducted at 55 to 65 °C for 3 to 7 min.

13. Method according to claim 11 or 12, wherein the method further comprises the step:
(iv) treating the substrate of step (iii) with an activation solution onto the surfaces of the nonconductive layer of the treated substrate of step (iii) for subsequent metallization.

14 Method according to the claims 11 to 13 wherein the copper layer attached to the nonconductive layer is further attached to a core layer, preferably the core layer is a FR4 material, SAP material or an IC substrate.

15. Use of the aqueous alkaline cleaner solution according to one of the claims 1 to 10 for glass filler removal treatment of a desmear treated substrate comprising a nonconductive layer basing on a composite of organic polymers and glass filler and a

copper layer attached to the nonconductive layer in manufacturing an article with an integrated circuit, wherein the nonconductive layer has at least one blind micro via within the surface of the nonconductive layer, wherein the bottom of the at least one micro via is built by the attached copper layer, wherein the surface of the nonconductive layer which is not attached to the copper layer and the wall of the at least one blind micro via expose the desmear treated organic polymers and glass filler.