[017] Another objective of the present disclosure is to provide a coating composition that is washed of completely during the washing step of the returnable containers.

[018] Still another objective of the present disclosure is to provide a coating composition that once applied, resists to the treatment of the recycled containers until they leave the filling plant.

[019] Still an additional objective is to provide a process for applying a coating composition that is washed off completely during the washing step of the returnable containers and that resists to the treatment of the recycled containers until they leave the filling plant.

[BACKGROUND OF THE INVENTION]Prior art

[020] The document US 4,803,099 describes a modified polyethylene, methods for its preparation and methods for finishing the external surfaces of glass containers. The modified polyethylene is suitable for cold-end coating of glass. The modified polyethylene comprises acid amide groups.

[021] The document GB 1,049,717 describes also a lubricous coating for glass. The coating composition comprises a reaction product of polyvinyl alcohol, an emulsified polyethylene and an acid compound.

[022] The document GB discloses a lubricity coating for plastics coated glass articles. The coating comprises an ionic copolymer of an alpha-olefin and an alpha,beta-ethylenically unsatured carboxylic acid.

[023] The document WO2004/049219 discloses a protective coating applying method for returnable glass containers. The protective coating is a paraffin based coating.

[024] None of the cited prior art discloses a coating composition comprising the wax compound (W1) that has a melting point below 85°C, in particular below 83°C, especially as coating for glass containers.

[Summary]

[024a] In an aspect, there is provided a coating composition suitable for glass containers said coating composition comprises a wax compound (W1) having a melting point between 65 °C and below 80 °C, and a surfactant.

Claims

1. A coating composition suitable for glass containers said coating composition comprises a wax compound (W1) having a melting point between 65 °C and below 80°C, and a surfactant.

2. The coating composition according to any of claims 1, characterized in that the saponification number of wax compound (W1) is above 20 mg KOH/g.

3. The coating composition according to any of claims 1 to 2, characterized in that the saponification number of wax compound (W1) is between 20 mg KOH/g and 250 mg KOH/g, still more preferably between 25 mg KOH/g and 225 mg KOH/g, even still more preferably between 30 mg KOH/g and 220 mg KOH/g, advantageously between 33 mg KOH/g and 210 mg KOH/g, more advantageously between 35 mg KOH/g and 200 mg KOH/g and even more advantageously between 40 mg KOH/g and 200 mg KOH/g.

4. The coating composition according to any of claims 1 to 3, characterized in that the acid number of the wax compound (W1) is above 1 mg KOH/g.

5. The coating composition according to any of claims 1 to 4, characterized in that the acid number of the wax compound (W1) is below 24 mg KOH/g.

6. The coating composition according to any of claims 1 to 4 characterized in that the acid number of the wax compound (W1) is between 2 mg KOH/g and 24 mg KOH/g, still more preferably between 2.5 mg KOH/g and 23 mg KOH/g, even still more preferably between 3 mg KOH/g and 22 mg KOH/g, advantageously between 3.5 mg KOH/g and 21 mg KOH/g and more advantageously between 4 mg KOH/g and 20 mg KOH/g.

7. The coating composition according to any of claims 1 to 6 characterized in that the wax compound (W1) comprises at least 50wt% of a compound comprising an ester function.

8. The coating composition according to 7, characterized in that compound comprising an ester function is made from at least an alcohol and a fatty acid and the alcohol of the organic ester is water soluble.

9. The coating composition according to any of claims 1 to 8, characterized in that the surfactant is comprised between 0.5wt% and 50wt%.

10. The coating composition according to any of claims 1 to 9 characterized in that the surfactant comprises a cationic surfactant.

11. A process for coating glass containers, said process comprises the steps of:

i) applying the coating composition according to any of claims 1 to 10 on the surface of a glass container,

characterized in that the coating composition is applied in form of an aqueous dispersion.

12. The process according to claim 11, characterized in that the aqueous dispersion comprises between 0.05wt and 5wt% of coating composition.

13. The process according to claim 11 or 12, characterized in that the coating composition in form of an aqueous dispersion is diluted before the application step.

14. The process according to any of claims 11 to 13, characterized in that it further comprises a step i'), preferably before step i), of cleaning by washing the glass container with a washing composition comprising a zinc or aluminium compound at temperature of less than 90°C.

15. Use of the coating composition according to any of claims 1 to 10 for returnable glass containers.