control of the pH of the solutions ensuring a moderately alkaline environment in which most metals are not rapidly corroded.

For low temperature heat transfer fluids for use other than in automotive applications, it is common to dissolve inorganic or organic salts in water to lower the freezing point. Some inorganic salts give extremely low freezing points, but at the price of very high corrosivity towards most engineering metals. Alternatively, formates and acetates, usually with potassium as counterion, can be used, which give much less pronounced corrosivity. Such solutions are naturally alkaline which contributes to the lower corrosivity.

For the most common aqueous heat transfer fluids there is detailed collected tabulated physical properties published [**2**] and [**3**]. There is also an instructive methodological monograph by the same author [**4**].

As can be seen from the above, there is a need for an improved heat transfer fluid, exhibiting state of the art heat transfer and low freezing point while at the same time being environmentally friendly and based on renewable materials.

Short Description of the Disclosure

The disclosure relates to a heat transfer fluid comprising or consisting of glycerol and potassium acetate in a weight ratio interval of 2:3 to 1:5 with a water content of 55-80 w%, wherein the combined weight of glycerol and potassium acetate constitutes 20-45 w%, e.g. 20-40 w%, up to a total of 100 w%. In one aspect, the present disclosure relates to a fluid comprising glycerol and potassium acetate in a weight ratio interval of 2:3 to 1:5 with a water content of 55-80 w%, wherein the combined weight of glycerol and potassium acetate constitutes 20-45 w%, up to a maximum of 100 w%. In another aspect, the present disclosure relates to a fluid consisting of glycerol and potassium acetate in a weight ratio interval of 2:3 to 1:5 with a water content of 55-80 w%, wherein the combined weight of glycerol and potassium acetate constitutes 20-45 w%, up to a total of 100 w%. The weight ratio interval of glycerol and potassium acetate may be any of 2:3, 1:2, 1:3, 1:4, or 1:5. The water content may be 55, 56, 57, 58, 59, 60, 65, 70, 75, or 80 w%, and the combined weight of glycerol and potassium acetate may be 20, 25, 30, 35, 40, or 45 w%, up to a maximum or total of 100 w%. Intervals may be composed using any of the above endpoints, in any combination of

components contained or comprised in the fluid. The fluid can be manufactured through neutralization of aqueousacetic acid, e.g. aqueous biogenic acetic acid, with potassium hydroxide or potassium carbonate, followed by addition of glycerol to the neutralized solution.

In another aspect, the present disclosure relates to a method of producing a heat transfer fluid, a deicing fluid or a windscreen washer fluid as described herein, comprising
a) neutralization of aqueous acetic acid with potassium hydroxide or potassium carbonate;
b1) addition of glycerol to the neutralized solution;
c) packaging of the solution obtained in containers of volume 1 to 1000 liters.

In another aspect, the present disclosure relates to use of a fluid as described herein as a heat transfer fluid.

In another aspect, the present disclosure relates to use of a fluid as described herein as a deicing fluid.

In another aspect, the present disclosure relates to use of a fluid as described herein as a windscreen washing fluid.