Thus, repair, replacement of the relevant part, frequent re-application of the glow paint or glow tape is needed translating to increased cost and down-times of e.g. a rappelling kit.

Glow plastic is only available in a resin form which must be heated to about 200-300 °C before moulding. Moulding requires special equipments and therefore glow plastic is not typically suitable for use at room temperature.

Furthermore, the luminous intensity of glow paint or glow tape is generally low and therefore they are not suitable for fabricating articles or application on articles used e.g. in night missions. Luminous intensity here refers to the level of brightness detected by the naked eye or the luminance detected by a lux meter

There is thus a need to provide a glow coat that seeks to address one or more of the above disadvantages.

SUMMARY

According to a first aspect, there is provided a method of preparing an epoxy glow coat comprising the steps of: mixing a predefined proportion of a clear epoxy and glow powder to obtain a viscous mixture; applying the viscous mixture on to a desired area; and curing the mixture~~. The~~, wherein the mixture is~~may be~~ obtained at room a temperature~~.~~, and wherein the proportion is about 5 ml of the epoxy in about 5g of glow powder.

The epoxy may be Devcon 2 Ton Clear Epoxy (2 in 1). The Devcon 2 Ton Clear Epoxy (2 in 1) epoxy may comprise an Epoxide (resin) and polyamide (hardener). The resin may be Epichlorohydrin and the hardener may be Bisphenol A.

The glow powder may comprise an Alkaline Earth-Metal Aluminate Oxide doped with Europium and has a chemical formula $MO.Al_2O_3$:EU.

~~The proportion may be about 5 ml of the epoxy in about 5g of glow powder.~~ The proportion of glow powder (in grams) to the epoxy (ml) may be about (0.8-1.2) : 1.

The method may further comprise the step of applying a plurality of layers of the mixture after the curing step to obtain a glow coat with a predefined thickness.

The viscosity of the epoxy glow coat may range between about 10 – 20 Pa.s. The viscous mixture may be applied directly to an article, or pre-formed from a mould.

According to a second aspect, there is provided an article comprising an epoxy glow coat prepared in accordance with the above method.

According to a third aspect, there is provided an epoxy glow coat comprising:a mixture obtained by mixing predefined proportions of a clear epoxy and glow powder~~. The~~, where mixture is~~may~~ obtained at room temperature~~.~~, and wherein the proportion is about 5 ml of the epoxy in about 5g of glow powder.

The epoxy may be Devcon 2 Ton Clear Epoxy (2 in 1). The Devcon 2 Ton Clear Epoxy (2 in 1) epoxy may comprise an Epoxide (resin) and polyamide (hardener). The resin may be Epichlorohydrin and the hardener may be Bisphenol A.

The glow powder may comprises an Alkaline Earth-Metal Aluminate Oxide doped with Europium and has a chemical formula $MO.Al_2O_3$:EU.

~~The proportion may be about 5 ml of the epoxy in about 5g of glow powder.~~ The proportion of glow powder (in grams) to the epoxy (ml) may be (0.8-1.2) : 1.

The method may further comprise the step of applying a plurality of layers of the mixture after the curing step to obtain a glow coat with a predefined thickness.

The viscosity of the epoxy glow coat may range between 10 – 20 Pa.s. The viscous mixture may be applied directly to an article, or pre-formed from a mould.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described with reference to the enclosed drawings, in which:

Figure 1 is an illustrated drawing of a door and door-frame comprising articles fabricated with the epoxy glow coat according to an embodiment of the present invention;

Figure 2 is an exemplary perspective view of a helicopter with a rappelling kit comprising articles fabricated with the epoxy glow coat according to an embodiment of the present invention.

Figure 3 is an exemplary perspective view of the rappelling kit of Figure 3;

Figure 4a, 4b and 4c are respectively the top, perspective and front views of a mould for fabricating a shear pin slot used in the rappelling kit of Figure 3; and

Figure 5 shows a flowchart illustrating a method for preparing an epoxy glow coat according to an embodiment of the present invention.