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Firelighters.

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Particles of talc having a size greater than 0.1 millimetres are included in a firelighter composition comprising a liquid hydrocarbon fuel emulsified in a resin, to extend burning time, control combustion, and economise on raw materials.

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1.

Firelighters.

The invention relates to firelighters.

A well known firelighter in general domestic use is the so-called white firelighter which comprises a solid block and which is based on a kerosine/ureaformaldehyde resin system.

It is known to add powdered talc to white firelighter composition to control combustion and extend the burning time. A typical particle size for powdered talc is 0.05 millimetres. Thus, a 40 gram piece of white firelighter without talc may burn for some 15 minutes, whereas a 40 gram piece containing 0.6% by weight of talc may burn for some 22 minutes. The longer burn and control heat release are of advantage in lighting difficultly ignitable solid fuels.

However the white firelighter utilises a kerosine in water emulsion. The aqueous phase of this emulsion contains a resin syrup which is caused to set by the use of a catalyst or hardener, thus producing a solid combustible material. Previously, it has not been possible to include more than 1% by weight of talc in such a firelighter because of a deleterious affect on emulsion stability.

We have now discovered that by using an increased particle size, greater levels of talc by weight may be included in white firelighters.

The invention provides a firelighter composition comprising a liquid hydrocarbon fuel emulsified in a resin, the composition also containing particles of talc having a size greater than 0.1 millimetres.

Preferably the fuel comprises kerosine.

2.

The talc particle sizes preferably lie in the range 0.2 to 2 millimetres.

Preferably a material known commercially as talc tailings is used.

5 The talc may comprise up to 10% by weight of the composition.

The advantages conferred on a white firelighter by inclusion of larger particles of talc (e.g. talc tailings) are as follows:-

- 10 (i) burning time is further extended.
 (ii) combustion control is increased and the firelighter burns with a reduced flame height. Thus the heat output is used more effectively within the fuel bed rather than being dissipated up the chimney as heat and
 15 light.
 (iii) there is an economy of use of essential raw materials, particularly kerosine.

Effects (i) and (ii) listed above combine to afford a firelighter of superior performance to known white
 20 firelighters.

By way of example, specific embodiments of the invention will now be described, with reference to the following Examples.

CONTROL 1

25 Firstly, a control composition was manufactured by making a white firelighter using the following ingredients:-

| <u>Ingredients</u> | <u>Percentage by weight--</u> |
|-------------------------|-------------------------------|
| Kerosine | 81.5% |
| Urea-formaldehyde resin | 8.0% |
| 30 Emulsifier | 0.5% |
| Water | 9.0% |
| Hardener | 1.0% |

A piece of this firelighter of dimensions 64.5 x 31.66 x 23 millimetres weighed 40 grams and burned for
 35 14 minutes 30 seconds.

3.

CONTROL 2.

A further control composition was made, using the same ingredients as CONTROL 1, but with 0.6% by weight of the kerosine replaced by powdered talc.

5 A 40 gram piece of the CONTROL 2 firelighter composition burned for 22 minutes.

EXAMPLE 1

A firelighter composition according to the invention was made using the following ingredients:-

| 10 | <u>Ingredients</u> | <u>Percentage by weight</u> |
|----|-------------------------|-----------------------------|
| | Kerosine. | 72.4% |
| | Ureaformaldehyde resin. | 7.1% |
| | Emulsifier. | 0.5% |
| | Talc tailings (AC11). | 10.0% |
| 15 | Water. | 9.0% |
| | Hardener. | 1.0% |

The talc tailings were grade AC11 obtained from Richard Baker Harrison Limited of Liverpool.

20 A piece of this firelighter of similar dimensions to that of the control firelighters weighed 43 grams and burned for 25 minutes.

The CONTROL 2 white firelighter piece was used to ignite a fixed charge of Coalite solid fuel in a room heater. Two pieces were required and a good fire was
25 established 30 minutes after the firelighters were spent.

The firelighter of EXAMPLE 1 was used to ignite Coalite under exactly similar conditions. One piece only was required and a good fire was established 15 minutes after the firelighter was spent.

30 EXAMPLE 2

A firelighter was made as EXAMPLE 1, but an alternative talc tailings material, grade T15 from Richard Baker Harrison Limited, was employed.

One piece, having the same dimensions as the pieces
35 mentioned above, weighed 38 grams and burned for 24 minutes.

4.

In neither EXAMPLE 1 nor EXAMPLE 2 was the stability of the emulsion affected by the addition of the talc.

The invention is not restricted to the details of the foregoing examples.

5.

CLAIMS

1. A firelighter composition comprising a liquid hydrocarbon fuel emulsified in a resin, the composition also containing particles of talc, characterised in
5 that the talc particles have a size greater than 0.1 millimetres.
2. A firelighter as claimed in Claim 1, in which the fuel comprises Kerosine.
3. A firelighter as claimed in Claim 1 or Claim 2,
10 in which the talc particle sizes lie in the range 0.2 to 2 millimetres.
4. A firelighter as claimed in any one of the preceding claims, in which the talc comprises talc tailings.
- 15 5. A firelighter as claimed in any one of the preceding claims, in which the talc comprises up to 10% by weight of the composition.
6. A firelighter composition as claimed in Claim 1, comprising the following:-

| 20 | <u>Ingredients</u> | <u>Percentage by weight</u> |
|----|-------------------------|-----------------------------|
| | Kerosine | 72.4% |
| | Ureaformaldehyde resin. | 7.1% |
| | Emulsifier. | 0.5% |
| | Talc Tailings. | 10.0% |
| | Water. | 9.0% |
| 25 | Hardener. | 1.0% |