

check.

DEMONSTRATION

of the exceptional qualities of Secondite to resist fire and acids and as an insulating material: when used as a building material, as a filter to separate light oils from water, in the protection of tanks against explosion: and to dispense with a petrol pump or carburettor in the standard petrol engine.

Arranged by Secondite Co. Ltd. of 25 Millbank, London, S.W.1.

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SECONDITE is a name which has been given to rice hulls after they have been treated by a patent process.

AFTER THIS TREATMENT Secondite is an inorganic substance of a very high silica content.

SECONDITE has been divided into three kinds, A. B. C. They have different uses but all three kinds have common characteristics in so far as they are fireproof, thermite proof and have insulating qualities possessed by few other materials.

TYPES A. AND B. with suitable binding agents, such as cement and magnesite, can be used as building materials. They have also mechanical applications in the protection of internal combustion engines, mobile and fixed tanks and for the making of filters.

TYPE C. has been used for the construction of pavements, wall boards, furniture, containers for corrosive liquids and for many other purposes where fire and acid resistant material is required.

WHEN IN A DRY STATE the weights are as follows:—

A.	. . .	96	kgs.	per	cubic	metre.
B.	. . .	110	"	"	"	"
C.	. . .	220	"	"	"	"

Most of the laboratory and development work has been carried out under the supervision of the inventor of the material, Mr. Secondi, who will demonstrate some of the uses to which the material can be put.

IT WILL BE SHOWN that when mixed with magnesite to make a slab less than 1" thick the material cannot be pierced by an acetylene burner nor is heat appreciably transmitted through the slab.

wood first, then slumps + petrol lighted
wood first + then secondite

1 2 - 4 5 x 1 0 - 6 - 7

WHEN SECONDITE is used instead of wood to make wall boards they are almost indestructible by fire and can be subjected to intense heat without losing strength.

WHEN A TANK is filled with SECONDITE, petrol can be added up to 90% of the capacity. The petrol can afterwards be drained or pumped out without any loss. Whilst the petrol and SECONDITE are in the tank it cannot be exploded. It will be shown that a tank full of petrol can be pierced and ignited without risk and that a hole in a metal container can be welded without removing the petrol.

(burned with coal tank of steel boiler) then welded
(burned with oxyacetylene?)

ANOTHER FEATURE of SECONDITE is that when mixed with petrol it will give off a purified gas of high value in qualities which can be adjusted by the machine using the fuel. From a specially designed tank a standard petrol engine can be run without a carburettor or petrol pump. The engine will have an appreciably higher power, use less fuel and can be started immediately at low temperatures without mechanical choking.

a normal car
without a carburettor.

VERY GOOD RESULTS have been achieved by using SECONDITE for filters. For instance, a filter will be seen which will separate water from petrol and retain any other foreign substance.

THE PROPERTIES AND USES of this peculiar material have not yet been fully exploited. Further development work is being done in Italy, Denmark and America.

BUT SUFFICIENT INFORMATION is available to show its potentialities in the fields mentioned above; and it is believed that for all kinds of fire and explosive protection, for armour plating, thermal insulation and for water resistance it will prove to be unequalled by any other material at present available.

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Printed by Welbecson Press Limited and Published by
Secondite Co. Ltd. of 25 Millbank, London, S.W.1.

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THURSDAY, JANUARY 21st., 1954

THE DEMONSTRATION will include the following items, the order of which will be announced over the loud-speakers:—

NUMBER ONE

Two slabs made with Secondite C and Magnesite will be subjected to a fire test by igniting petrol to show the high fireproof qualities of the slab. After five minutes there will be no damage other than a surface carbon from the petrol.

NUMBER TWO

Secondite A bound with cement into a slab, with an iron bar, will be subjected to a heat test to prove the high thermal insulating properties—candles on top of the slab will not melt even when sufficient heat is applied to melt the iron.

NUMBER THREE

An oxy-acetylene flame will be applied to a thin slab of Secondite C bound with Magnesite. The slab will not be pierced nor will any significant heat be transmitted through the slab.

NUMBER FOUR

To show the thermal insulating properties contained in Secondite a cupola made of Secondite A and cement will be subjected to intense outside heat protecting the contents of the cupola from any change.

NUMBER FIVE

A wood box filled with Secondite A will be filled with petrol and ignited. It will burn on the surface only for a short time and will then die out and cannot be relit without moving the thin top layer of charred Secondite.

NUMBER SIX

Burning petrol will be poured through a thin diaphragm of Secondite. This will put out the flame and allow only liquid to pass.

NUMBER SEVEN

An acetylene torch will be applied to a diaphragm of Secondite of varying thickness. The flame will not penetrate but will be transformed into a greasy grey smoke heavily laden with CO^2 .

NUMBER EIGHT

A tank lined with Secondite will be pierced with an acetylene flame and then welded with the tank still part filled with petrol.

NUMBER NINE

A tank part full of petrol and lined with Secondite will be blown up with explosive to show that the explosion will not fire the petrol in a tank so protected.

NUMBER TEN

A specially constructed tank will be directly connected to a motor car engine. This will automatically supply gas without carburettor or petrol pump. The effect is to give a higher power output and economise fuel.

PUBLISHED BY

THE SECONDATE CO. LTD. OF 25 MILLBANK, S.W.1

AND PRINTED BY

WELBECSON PRESS LTD., LONDON, S.W.11