
greeng
Green Engineering
INNOVATION
Construction & Insulation & Arts
ALTERNATIVE TO SYNTHETIC RESINS
100% NATURAL A NEW INDUSTRIAL
MATERIAL
environmentally
FRIENDLY

greeng INNOVATION

Green Engineering

Construction & Insulation & Arts

MAIN PROBLEM

ECOLOGICAL REFRACTION CAUSED BY INDUSTRIAL POLLUTION CAUSED BY RAPIDLY INCREASING CONSUMPTION ACCORDING TO THE INCREASING WORLD POPULATION

Presented by Bülent Gürakın

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THE OUTPUT OF THE PROBLEM

With the reform and the Renaissance movements, the change in the perspective of humanity towards science, the development of science with giant steps, in parallel with the control of epidemics, the developments in health, hygiene, food processing and logistics have caused an extraordinary increase in the world population in a very short time. Accordingly, with the industrial revolution, the processing of coal and petroleum with modern techniques, the variety of practical and cheap raw materials required by the industry quickly came to the market, and they responded to the raw material needs of the developing industry economically and quickly. This rapidly developing process has led to the rapid abandonment of old raw materials without a pollution story in some sectors. One of these raw materials is Clay. Clay, the difficulty of the production stages, the production requiring skilled labor, the necessity of baking, etc. It has been abandoned in many industries for reasons and has been replaced by petroleum, plastic, synthetic raw materials, which leave behind pollution stories that are very difficult to remove. It has been understood that this is unsustainable with the emergence of environmental problems as the first threat to the civilization we create.

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CONNECTED PROBLEMS

"A shameful 50-year-old story of pollution within a civilization story of tens of thousands of years ..."

UNPREVENTABLE, PERMANENT ENVIRONMENTAL POLLUTION

Too much profit in a short time + Unconscious overconsumption + Uncontrolled industrial production = rapidly deteriorating ecology

ENVIRONMENTALLY HAZARDOUS INDUSTRIAL RAW MATERIALS DOMINATE THE MARKET

Synthetic origin industrial raw materials, with economical prices and suitable solutions for every problem, lead the world towards an irreversible solution

PARADOX

Wild and uncontrolled production + Environmental, unavoidable pollution + Disrupted ecology = The civilization we created poses a threat to itself ...

LOTS OF CARBON EMISSIONS & CLIMATE CHANGE

The bankruptcy of the development story

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FOCUSING ON SOLUTION

WE ARE VERY CREATIVE BUT VERY SMART
WE CANNOT BE TALKED THAT WE ARE ...

Are the solutions we found rational ..?
Not enough ...
The result: an ecology that cannot renew itself

INDUSTRIAL MATERIAL
SOLUTIONS IN HARMONY
WITH NATURE REQUIRED

An old but renewed
perspective

RIGHT HINT FOR SOLUTION ...

A material without a pollution
story for tens of thousands of
years: CLAY

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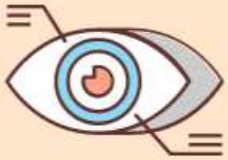
FOCUSING ON SOLUTION

PEOPLE WERE NOT SMARTER THAN US IN OLD TIME, BUT THE SOLUTION MAY BE HIDDEN IN THE PAST OF HUMANITY

An old but new alternative
= CLAY + POZZOLAN



A NEW PERSPECTIVE TO OLD SOLUTIONS WITH INNOVATION

Researching the potential of clay, which is already a very important industrial material, with today's advanced research techniques can contribute to the solution of the problem

RESULT: A COMPLETE SUCCESS...

Ancient civilizations may be right to prefer clay and natural pozzolan

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ADVANTAGES OF SYNTHETIC RESINS

For the reasons we mentioned in the introduction, synthetic resins dominate the market and almost all standards are regulated according to these resins. Thanks to their dominance in the market, extensive scientific studies have been carried out on the material and special solutions have been developed for many specific problems. Thus, different variations of these products have been developed and are widely used in the industry. It provides the opportunity to apply with similar tools.

DISADVANTAGES OF SYNTHETIC RESINS

It is of synthetic origin and is not sustainable.

The total cost is very high considering the elimination of environmental and health problems it creates + the unsustainable nature.

Environmental and health costs are invisibly financed by the whole world.

Its price is sometimes manipulated by multinational companies holding oil resources according to global developments, causing serious cost increases and price fluctuations.

Until today, the lack of alternative materials, the features based on practical and scientific studies offered to the user; The toxic environmental effects it created resulted in ignoring the damages it caused to human health during the production and usage processes. These effects are not to be underestimated or negligible.
In the Safety Data Sheet of polyester resin, there are 9 important health risks in the "harmful effects" section and 13 protective precaution items in the precautions section.

Therefore, it has features that pose a great risk to the environment and human health.

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GREENG INNOVATİON SOLITIONS

GENERAL CHARACTERISTICS OF THE MATERIAL THAT CAN BE USED INSTEAD OF SYNTHETIC RESINS

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Clay + Natural Pozzolan

+ It is a completely ecological and natural material. It does not cause any harm to the environment during the production and application stages. It does not cause environmental pollution. It does not smell. Carbon footprint is almost zero.

+ Petroleum is indestructible and non-toxic like synthetic materials. When it is turned into waste, it mixes with nature and becomes a part of nature again.
It is an A1 class incombustible material. It can withstand very high temperatures without losing its physical properties.

+ Its raw material is extremely economical. It is available in unlimited quantities all over the world. It requires an extremely easy process to obtain.

+ It does not require oven, temperature, autoclave or technological equipment in its production. It is simply mixed and applied. Under atmospheric conditions, it hardens automatically for 4 hours in hot weather and 12 - 14 hours in the coldest weather.

+ Allows for on-site application. It provides the opportunity to apply the special forms with brush, trowel, spatula and similar tools by simply mixing the material where it will be used, pouring it into molds with the desired properties, spreading it on the floor, spraying.

Clay + Natural Pozzolan

+ In terms of density,
With the additives mixed into it by the user, it can be adjusted by the user from 1600 kg / M3 to 2500 kg / M3.

+ In terms of physical resistance;
Depending on the density of the material to be obtained, it is possible to provide a physical resistance from 15 MPascals to 60 MPascals.

+ It is not affected by water but breathes. Humidity and air permeability coefficient can be adjusted by the user as desired.

+ It does not stick to the mold, to release it from the mold, such as wax, release agent etc. it does not need substances.

+ Our material can be colored in any desired color with natural color pigments. It carries this color in its structure forever.

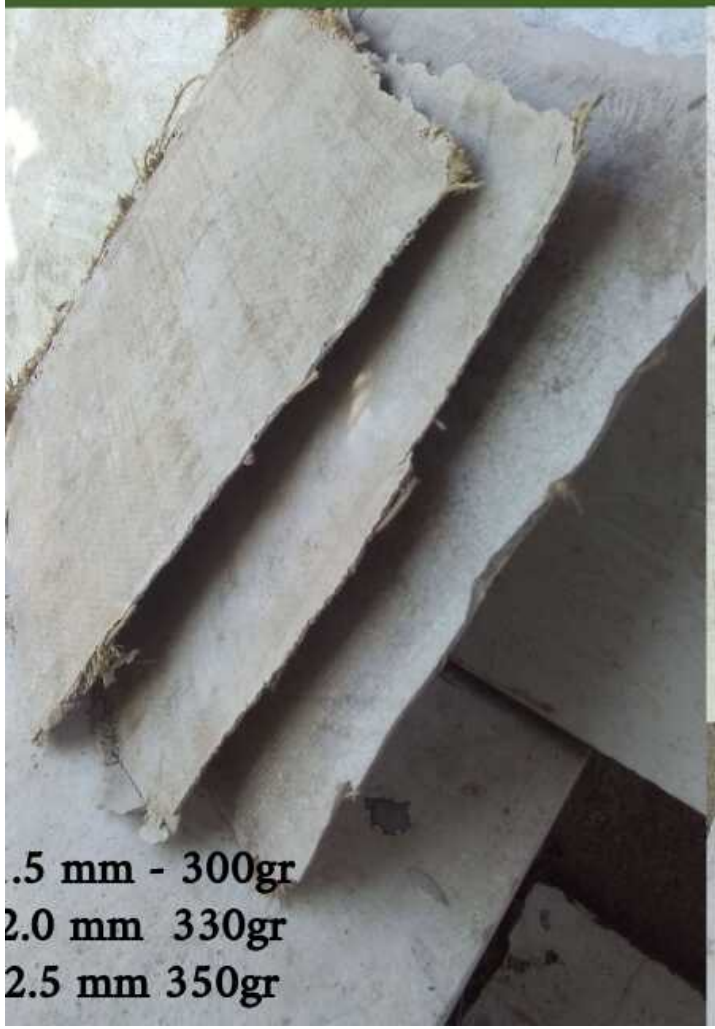
+ It is possible to use several different densities and forms of our material in the same production stages.

NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS

By making small changes in the main formula and adjusting the viscosity, layered applications can be made in open molds by using fiber reinforcement, just like in polyester resin applications. Thus, it is possible to produce light and durable products in the form of shells in large volumes.

ECO FRIENDLY PRODUCT

NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS



Glass, carbon fiber can be used as fiber, as well as silicone-based or polyester-based fibers used in textiles or special purpose composite fibers that can be produced for this purpose can be easily used. In addition, it can be used instead of glass fiber in jute, hemp, hemp, linen, cotton fibers, yarns and special fabrics knitted from them.

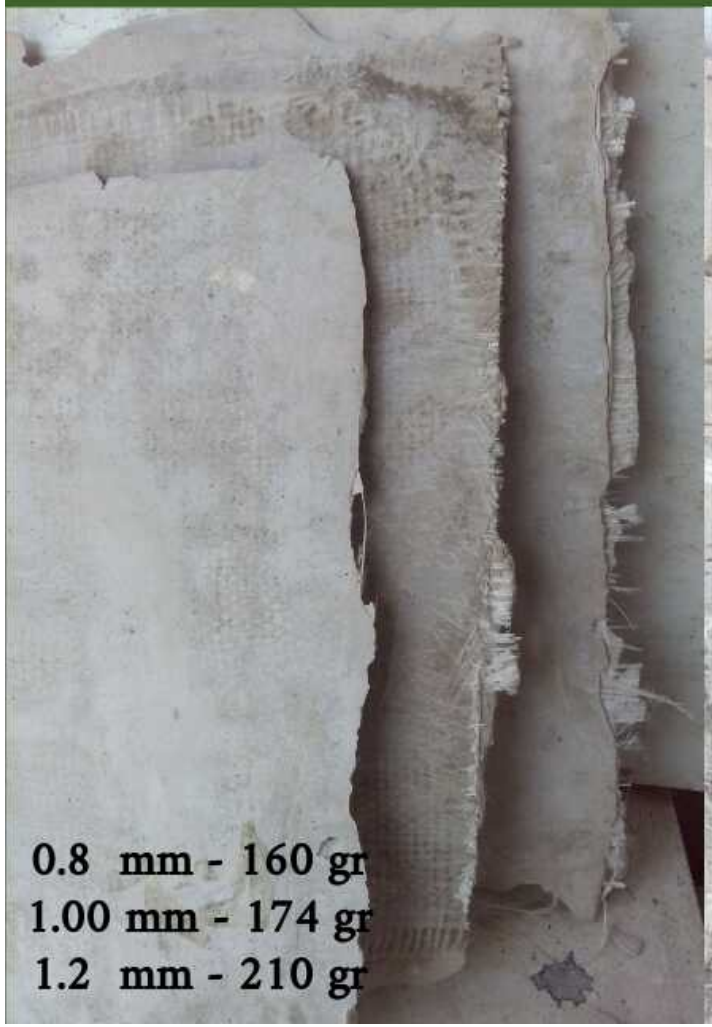
NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS

Viscosity adjustment and cleaning of the materials used are done simply by "Water".With this application, which is a new alternative to GRSR applications, the odor, gas, material and environment pollution, extremely harmful effects on human health, etc. Negative factors such as are eliminated.

300 gr/M2 Glas fibre fabric app.
1 Lay.- 2 Lay. - 3 Lay.. 20x 300 cm

1.0 mm - 300 gr
1.5 mm - 311 gr
2.0 mm - 320 gr

NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS



Another very important advantage of the applications made with this new technique is that the shrinkage rates after hardening are below 1%. However, in GRP applications, shrinkage after hardening can reach up to 3%, - 6%.

Environmental
Friendly

NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS

It has been revealed in our preliminary studies that synthetic resins can achieve their extreme physical properties if they are turned into a project and worked on with advanced scientific techniques. The Technological Preparation level of my material is TRL7.
For the TRL 8 and TRL 9 stages, only a small adaptation process is required.

EXTRAORDINARY FEATURE OF OUR MATERIAL: Ability to form a fiber-free form by applying 1 mm to the surface with a brush.

NEW PRODUCTION TECHNIQUE ALTERNATIVE TO GRSR APPLICATIONS

IN ADDITION TO THE ABOVE FEATURES

It is extremely economical and low cost

Synthetic resins / kg: 1.4 - 5.0 EURO price range

Our material that can be used as an alternative to synthetic resins / kg: 0.25 EURO

WHAT CAN BE DONE WITH OUR MATERIAL

Food resting, stocking, fermentation tanks, large cylindrical containers

According to the results we have achieved as a result of the R & D studies we have successfully concluded at this stage, it is possible to produce and market the following products using the same technique, the same molds, the equipment used in the production of synthetic resins and a very short adaptation study with our material to be used instead of synthetic resin.

ECO FRIENDLY

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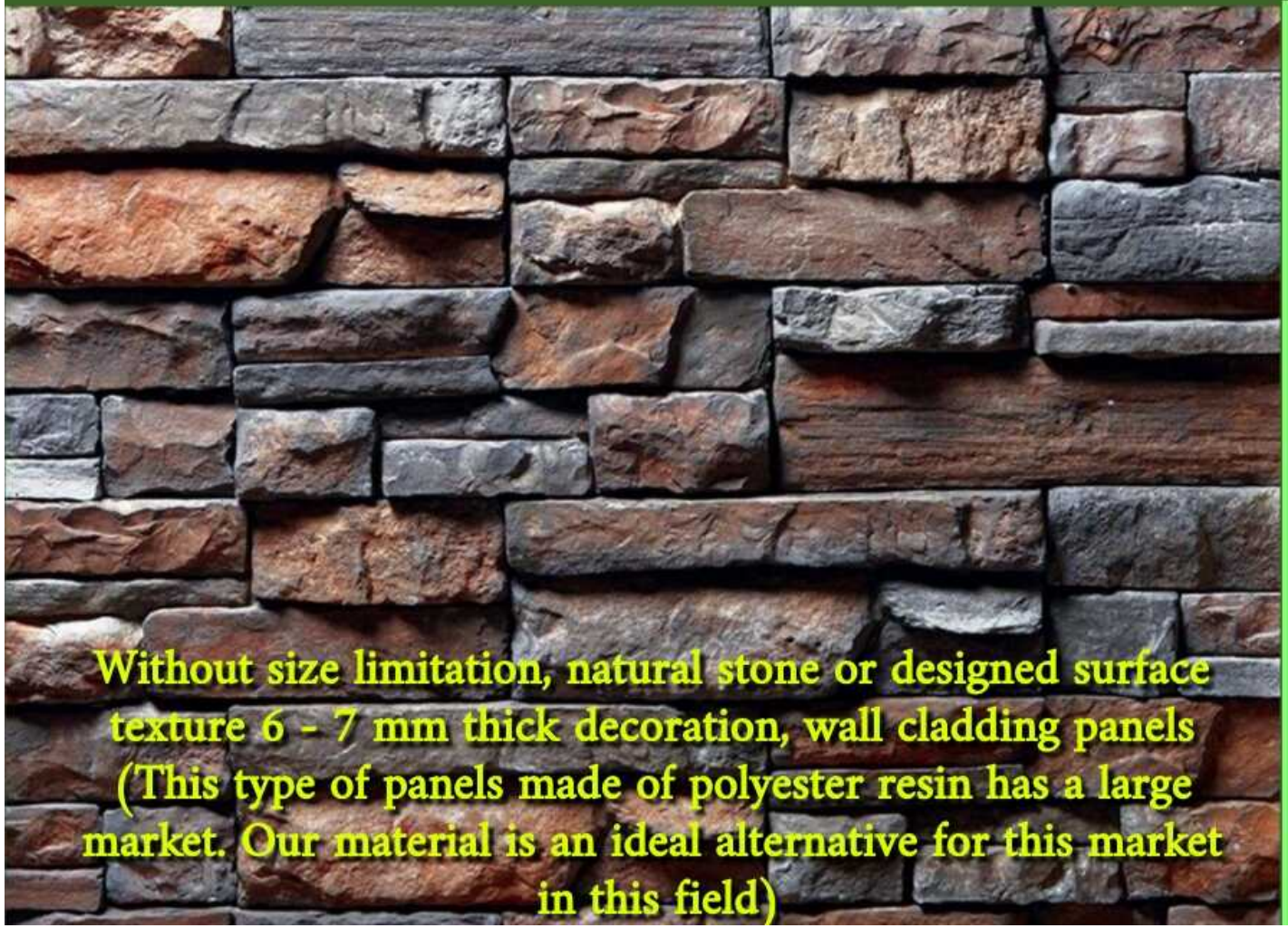

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eco technology

THE ADVANTAGES OF THESE PRODUCTS TO BE PRODUCED IN THE MARKET

1 - A1 Fireproof product certificate

2 - Extremely economical product cost

3 - Possibility to add 100% ecological arguments to product features

4 - Extremely low carbon footprint product range

5 - 0 toxic effect to the environment, producers, users

6 - The feature of being a part of nature immediately when it turns into waste

7 - Supply of healthy drinking water that has not come into contact with toxic substances.

The advantages that are written above and that can be added further, are the features of the products that will be preferred today when the sensitivity to the environment is rapidly increasing, and will become mandatory in the near future.

MARKET FIGURES

100%

According to the 2020 figures; The global synthetic resin market is around 31 Billion US Dollars, with Polyester resins around 12 Billion US Dollars, Epoxy resins around 11 Billion US Dollars, Polyurethane resins around 8 Billion US Dollars.

- The material we have developed has much more economical and superior properties than all classical materials in total.
- Our project needs a fast, robust and rational marketing strategy. We laid the foundations, we can raise the structure together.
- Users will naturally prefer our material when the material is put on the market.

This project is necessary to restore the deteriorating ecological balance. It is very difficult for us to continue this project alone together with our other projects. To complete the scientific aspect, we need official and semi-official institutions, media support for promotion, and financial resources to finance our work.

We are looking for Universities and Research Institutes, Non-Governmental Organizations, Environment and research foundations, funds and companies with strong infrastructure to carry the project to the market.

For more information, you can visit our website www.greenginnovation.com. Or you can contact us at blntgrkn@gmail.com