

Wall Protection Coating

Technical Field

- 5 The invention relates to a wall protection coating, method for providing temporary protection, including weather protection, to a surface, and articles applied with the protection coating.

Background of Invention

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A coating of paint is generally applied to the surfaces of objects, for instance vehicles, walls in a house or building, ships, oil rigs, and superstructures. The paint serves two main purposes – a protective purpose to protect the surface of the object from scratches, rusting for iron containing objects, and for aesthetic purposes.

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A superstructure in general refers to a structure built on top of a fundamental structure. For example, a ship is made up of a hull and a superstructure. Both the hull and superstructure are usually fabricated in smaller blocks to be joined together later. This is similarly applicable to other examples like oil rigs and buildings.

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It could take months to years to complete construction of the smaller sub-assembled blocks and assembly into the final form. Typically, the smaller blocks will be painted after they have been constructed to protect them. During this time, the exterior final paint coating on the sub-assembled blocks could deteriorate due to environmental and weather conditions, e.g. ultraviolet exposure, rain, and industrial conditions, e.g. contamination, rust, mechanical damage. These conditions result in peeling and dulling of the paint coating, and a visually unappealing finishing, or more seriously affect the integrity of the building block. In order to restore the paint coating, the external structures have to be repainted incurring additional labour and material costs.

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A peelable coating or film to protect a metal surface is commercially available. A wet film comprising a water soluble emulsion resin is applied to a metal or a painted surface; after the wet film dries, a water resistant dry film is left on the surface. The

dry film protects the surface beneath and can be peeled off as and when required. The dry film is usually transparent in nature. However, the emulsion resin is expensive. For application to a large surface area, a substantial amount of time is required for the film removal as the film must be removed from the edges. The disposal of the used film and emulsion resin poses another problem as synthetic polymers, if present, are potentially toxic and non-biodegradable, and need to be disposed according to local environmental regulations.

Summary of Invention

According to a first aspect of the invention, there is provided a wall protection coating comprising: a liquid mixture obtained by mixing at least one gluten-containing flour; at least one gluten-free flour; and water, wherein the liquid mixture is to be applied as a temporary coat to a wall surface and curable by drying to produce a temporary protective coating on the wall surface.

In an embodiment of the first aspect of the invention, the liquid mixture is obtained by mixing about 23 to about 27 parts by weight of the at least one gluten-containing flour, about 19 to about 23 parts by weight of the at least one gluten-free flour, and about 50 to about 58 parts by weight of water.

The range provided is taken to include the end points and also rounded off values.

In an embodiment of the first aspect of the invention, the at least one gluten-containing flour is selected from the group consisting of wheat flour, rye flour, oat flour, barley flour, and hybrids thereof.

In an embodiment of the first aspect of the invention, the wheat flour is selected from the group consisting of maida flour, plain flour, all-purpose flour, bread flour, whole wheat flour, and cake flour.

In an embodiment of the first aspect of the invention, the at least one gluten-free flour is selected from the group consisting of corn flour, tapioca flour, potato flour, rice flour, and wheat starch flour.

In an embodiment of the first aspect of the invention, the rice flour is selected from the group consisting of glutinous rice flour, white rice flour, and brown rice flour.

5 In an embodiment of the first aspect of the invention, the at least one gluten-free flour comprises tapioca flour and white rice flour.

10 In an embodiment of the first aspect of the invention, the at least one gluten-containing flour is maida flour, and the at least one gluten-free flour is white rice flour.

In an embodiment of the first aspect of the invention, the wall surface is part of a marine structure or marine vessel.

15 In a second aspect of the invention, there is provided an article comprising: a wall surface; and a temporary coat applied to the wall surface to provide temporary protection thereto, wherein the temporary coat, before drying, comprises a liquid mixture obtained by mixing at least one gluten-containing flour; at least one gluten-free flour; and water.

20 In an embodiment of the second aspect of the invention, the temporary coat is applied to a paint coating of the wall surface.

25 In an embodiment of the second aspect of the invention, the wall surface is part of a marine structure or marine vessel. The marine structure may be an oil rig or a platform.

30 In some embodiments of the second aspect of the invention, the composition and components of the liquid mixture are selected as described in embodiments of the first aspect of the invention.

In a third aspect of the invention, there is provided a method for providing temporary protection to a wall surface, the method comprising:

providing a flour mixture comprising at least one gluten-containing flour and at least one gluten-free flour;

mixing the flour mixture with water to produce a liquid mixture;
applying the liquid mixture to the wall surface; and
allowing the applied liquid mixture to dry to produce a temporary coat on the wall surface to provide temporary protection thereto.

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In an embodiment of the third aspect of the invention, applying the liquid mixture to the wall surface includes applying the liquid mixture to a paint coating on the wall surface.

10 In some embodiments of the third aspect of the invention, the composition and components of the liquid mixture are selected as described in embodiments of the first aspect of the invention.

15 In an embodiment of the third aspect of the invention, applying the liquid mixture to the wall surface includes applying the liquid mixture to the wall surface by an airless spray gun, paint roller, or paint brush.

In an embodiment of the third aspect of the invention, the wall surface is part of a marine structure or marine vessel.

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In an embodiment of the third aspect of the invention, the method further comprises: removing, by using pressured water, the temporary coat to reveal the wall surface.

25 In an embodiment of the third aspect of the invention, providing a flour mixture comprising at least one gluten-containing flour and at least one gluten-free flour includes mixing the at least one gluten-containing flour and the at least one gluten-free flour.

Detailed Description of Embodiments of the Invention

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In the following description, numerous specific details are set forth in order to provide a thorough understanding of various illustrative embodiments of the invention. It will be understood, however, to one skilled in the art, that embodiments of the invention may be practiced without some or all of these specific details. In other instances, well

known process operations have not been described in detail in order not to unnecessarily obscure pertinent aspects of embodiments being described.

5 A wall protection coating is disclosed herein which, after curing, produces a temporary protective coating on a surface. The coating comprises a liquid mixture which comprises or is obtained by mixing at least one gluten-containing flour, at least one gluten-free flour, and water.

10 In preferred embodiments, the coating comprises: a liquid mixture which comprises or is obtained by mixing at least one gluten-containing flour in about 23 to 27 parts by weight; at least one gluten-free flour in about 19 to about 23 parts by weight; and water in about 50 to 58 parts by weight.

15 The term "wall" generally refers to a surface for enclosing an interior space from exterior space, dividing interior space, supporting floors, roofs, or the like, fencing areas, or combinations thereof. Such surface may form part of a building structure for residential, commercial, industrial or other purposes. In particular, the wall may be a metal or concrete surface.

20 The wall may be part of a marine structure or marine vessel. The marine structure could be a movable or fixed structure, for example a platform or an oil rig. The marine vessel may be a ship, tanker, etc. The wall may be part of the hull or superstructure of a marine vessel.

25 The term "wall protection" generally refers to protection of the wall against external elements including weather elements, e.g. ultraviolet radiation or sunlight, wind and rain, and industrial elements, e.g. stain or rust, contamination.

30 The term "temporary" means that the coating is easily removable as compared to normal paint which usually needs to be painstakingly scraped off. As such the term "temporary" does not restrict the use of the coating to a specific time period, but rather as required by the user to protect the surface and thereafter be removed when protection is no longer required.

The “at least one gluten-containing flour” may be obtained by employing one gluten-containing flour type or mixing two or more gluten-containing flours in suitable amounts. This is similarly applicable to the “at least one gluten-free flour”.

- 5 The terms “weight” and “mass” are treated as the same herein. The term “parts by weight” are used to describe the relative proportion of the components used to prepare the liquid mixture.

10 The term “curing” generally refers to hardening or drying of the coating composition on a wall surface. The curing process may or may not involve a chemical reaction that changes the individual constituents of the coating composition.

15 A flour generally refers to a finely grounded meal or powder made from grinding cereal grains, seeds or roots of plants. Thus, the flour is usually named after the grain or plant source; for wheat flour, the flour may be named after the intended purpose instead, e.g. all-purpose flour, plain flour, cake flour, bread flour etc. All the flour used herein were bought commercially. Some of the flour may comprise additional food additives and preservatives commonly added by the flour mills or manufacturers, and generally do not affect the working of the coating composition.

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Gluten generally refers to a mixture of proteins (storage proteins termed prolamins) found in wheat and related grains including barley, rye, oat, and all their species and hybrids (such as spelt, kamut, and triticale). The stored proteins of corn (also known as maize) and rice are sometimes called glutens, but such proteins differ from true
25 gluten and therefore corn flour (maize flour) and rice flour are generally considered to be gluten-free. Gluten is generally appreciated for its viscoelastic properties.

Some examples of gluten-containing flour are shown in Table 1, including wheat flour and oat flour. Gluten is the major protein component in wheat flour but is a
30 minor component in oat flour. It is contemplated that any flour containing gluten is suitable for use, including those not shown in Table 1, e.g., barley flour, and rye flour.

A hybrid generally refers to a cross breed of two animal or plants of different breeds, varieties, species, or genera. Hybrids are generally grown to combine beneficial traits from different strains into a single strain. The term “hybrid” herein thus encompasses hybrid wheat varieties, and hybrids between the grains listed above.

- 5 Examples of commonly available hybrids containing gluten include spelt (a naturally occurring wheat hybrid), kamut (a naturally occurring wheat hybrid), triticale (a hybrid of wheat and rye) and other commercially available gluten-containing hybrid plants.

- 10 Wheat flour has many varieties, depending on the type of wheat grain, part of the grain used to make the flour, brand, season and region where the flour is purchased or manufactured. These variations affect the composition of the flour. However, the examples in Table 1 show that the different varieties of wheat flour are usable in the coating composition.

- 15 Maida flour is a finely milled refined and bleached wheat flour commonly used in central Asian and southeast Asian cuisine. Plain flour, all-purpose flour, bread flour, cake flour, and wheat flour are all flour made from wheat. Generally, they differ in the protein content. Generally, flour from the same mill or manufacturer tend to produce bread flour having the most protein followed by all-purpose flour and plain flour with
20 approximately similar protein content, and cake flour typically having the lowest protein content.

- Wheat flour, rye flour, oat flour, barley flour, and hybrids thereof are all considered to be suitable for use as the gluten-containing flour component of the coating
25 composition.

- Some examples of gluten-free flour are shown in Table 1, and include corn flour (also known as maize flour), tapioca flour, potato flour, and rice flour. The rice flour may be made from various types of rice, e.g. glutinous rice, white rice, brown rice,
30 and other rice grains. Another possible gluten-free flour is wheat starch flour, which is made from wheat with only the carbohydrate component; in other words the protein component, in particular gluten, has been removed and therefore wheat starch is considered to be gluten-free. Different gluten-free flours can be combined in various amounts to form a mixed gluten-free flour. For example, soon kueh (soon

kuay) flour is a flour used to make dumpling wrapper. The soon kueh flour comprises tapioca flour and rice flour, but could additionally comprise at least one of corn flour, glutinous rice flour and wheat starch flour, for a different texture and flavour in the dumpling wrapper. The soon kueh flour is available commercially but can also be self-made by mixing different flours, usually gluten-free flour. The various combination of such flours are all considered to be suitable as long as the soon kueh flour mix does not contain gluten. Other gluten-free flour types which are not listed in Table 1 are also possible to be used.

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Table 1

	Flour Type	Mixture No.																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gluten-free flour	Corn		x									x				x					
	Tapioca				x						x							x			
	Soon Kueh					x									x				x		x
	Glutinous Rice			x						x							x				
	Potato						x								x						
	White Rice	x						x	x				x							x	
Gluten-containing flour	Maida	x	x							x									x		
	Plain			x								x									x
	All-purpose				x								x								
	Bread					x					x			x			x			x	
	Cake						x														
	Whole Wheat							x								x					
	Oat								x						x			x			

Examples

The various flour types used in the examples listed in Table 1 were bought commercially and used directly. All the wall protection coatings in Table 1 are produced by mixing at least one gluten-containing flour, at least one gluten-free flour, and water in a 25:21:54 mass ratio respectively, or 25 parts by weight of the at least one gluten-containing flour, 21 parts by weight of the at least one gluten-free flour, and 54 parts by weight of water.

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Various methods are available to prepare a wall protection coating for application to a wall surface and to temporarily protect the wall surface, and are described as follows.

- 5 In one method, all three components, i.e. at least one gluten-containing flour, at least one gluten-free flour and water, are placed in a mixing container and stirred or mixed, preferably with a mechanical stirrer or mixer, until a liquid mixture with no solids or lumps is obtained.
- 10 In another method, at least one gluten-containing flour and at least one gluten-free flour are weighed and added to a mixing container. The required amount of water is provided in another mixing container. The flour mixture comprising both the gluten-containing and gluten-free flour is added into the water with continuous stirring or mixing, preferably with a mechanical stirrer or mixer, to obtain a liquid mixture with
15 no solids or lumps.

It is to be appreciated that other sequences and variations thereof are feasible. For example, water can be added to the flour mixture, or each type of flour is mixed individually with water prior to combining both liquid mixtures, or the gluten-
20 containing flour and gluten-free flour are pre-mixed, or a pre-mixed flour mixture is commercially available, or combinations thereof.

The twenty examples shown in Table 1 were prepared according to the mass or weight ratio provided and were all found to be suitable coating compositions as
25 described herein. All the liquid mixtures were applied to a trial wall surface. A mixture comprising of white rice flour, maida flour, and water (Table 1 Mixture No. 1) in the mass ratio as described was used for further trials.

The resultant liquid mixture is applied to a wall surface by any conventional painting
30 methods. Some commonly employed methods include using an airless spray gun, a painting roller, and a paint brush, or combinations thereof for effective application to the required wall surface. In one embodiment, the liquid mixture is applied to a paint coating of the wall surface. As the wall protection coating composition does not contain volatile organic solvents, there is a greatly reduced or negligible

accumulation of flammable and harmful vapour in the surrounding environment while using the wall protection coating. The liquid mixture also reduces the accumulation of fine flour powder in the atmosphere. Both of these factors reduce the fire hazards, and are particularly important for the safety of the people working on the structure, in particular in confined and enclosed environments.

After application of the liquid mixture to the wall surface, the liquid mixture is allowed to cure by drying to evaporate water from the mixture. Alternatively, a dryer or blower could be used to quicken the curing process. As no flammable organic solvents are used, heating can be used to hasten the curing process if desired. The protective coat could be reapplied as required for multiple protective layers or when certain portions have been removed. The dried wall protective coating forms a white coating layer on the wall surface whereas most conventional protective films are transparent.

After curing, the cured liquid mixture or coating produces a layer of protective coating on the finish coating on the surface of the structure. The protective coating acts as a physical barrier to protect the underlying surface from weather elements like rain, and ultraviolet radiation, and industrial contamination. In particular, if the underlying surface is a painted wall surface, the wall protection coating protects the paint coating from deterioration.

The applied wall protection coating is removable by using pressured water to reveal the original or underlying surface, e.g. a painted surface, or a metal surface. The pressured water refers to water which applies a force on the protective coating to overcome the forces that bind the coating to the surface. In one method, the protective coating may be removed or washed off by using a pressured water spray.

In this regard, it has been observed that the protective coating is removed at least partly when subjected to intense rain e.g. severe thunderstorms. The protective coating is able to withstand light rain (drizzle) with minimal removal of the protective coating. For a smaller object, placing the object with the protective coating in a water bath with sonication could be sufficient to effect removal of the protective coating. Prolonged or sustained exposure to water impacting the coated surface will probably effect at least partial removal of the coating. It will be appreciated that the wall

protection coating could be reapplied as required. Some users may find it easier to allow the protective coating be naturally washed off by the rain over time; although this may not be allowed in certain countries due to waste disposal regulations despite the non-toxic and biodegradable nature of the protective coating.

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It has been found that the protective coating bears similar application characteristics as paint. The wall protective coating is able to protect a metal surface and or a painted surface from the environmental and weather conditions. In addition, the protective coating has the advantage of being easily applied and removed as needed.

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This is of relevance to the marine industry due to the working environment of the marine industry. The sea water, industrial environment, and weather conditions accelerate deterioration of metal and painted surfaces. However, it will be appreciated that the protective coating could be applied to machine parts and machines in general, particularly for storage or shipment purposes.

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To illustrate this, in the automotive industry, certain parts may have been fabricated but are not immediately required. The wall protective coating may be applied to protect the surface of the part and removed prior to the part being used. The final assembled vehicle may similarly be applied with the protective coating for shipment to another location, particularly when the shipment is by sea. The surface as such will also be considered a type of wall surface. It will be appreciated that this is similarly applicable to other manufacturing industries.

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In an example, the wall protection coating of the invention is to be applied as a temporary coat to a wall surface of a marine structure or vessel. The wall surface may or may not be painted. When the wall protection coating is cured, it produces a protective coating on the wall surface. This protective coating provides temporary protection, including weather protection, to the coated surface. This could be applied to the marine structure or vessel, in particular the external surfaces.

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The coating can be removed using pressured water to reveal the original or underlying surface. This temporary protection is especially useful in mitigating the

deterioration effects of weather and industrial conditions during construction of marine structures or marine vessels, in particular the smaller building blocks prior to final assembly. Accordingly, the marine structure may be a floating or non-floating structure like an oil rig or a platform.

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For example, the smaller building block may be painted after it has been completed; the wall protection coating is further applied to the building block to protect the painted surface. When required, the wall protection coating is removed by a pressured water spray without damaging the painted surface, to reveal the original painted surface. This saves time and costs as the building block need not be repainted due to degradation of the painted surface.

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The wall protective coating can be used as well on buildings to protect the paint coating of the buildings. This could be useful for pre-fabricated or unoccupied units.

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Without being limited by theory, it is possible that the protective coating as described above may act as a sacrificial coat or physical barrier to protect the underlying wall surface. The general deterioration or aging of a surface, is usually due to the presence of either or both of oxygen and water. By preventing or reducing the access of the underlying surface to oxygen and water, the deterioration process is possibly slowed down.

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When the wall surface in question is an iron or steel based surface, there is a high tendency for rusting to occur. For rusting to occur, iron, oxygen and an electrolyte need to be present. The electrolyte is often water containing dissolved atmospheric carbon dioxide. Typically in an industrial area, the concentration of acidic gases like carbon dioxide, sulphur dioxide and oxides of nitrogen are higher, which leads to rainwater that is more acidic and with a higher ion concentration than normal. Furthermore, the marine construction industry is usually located near to the sea. Sea water contains sodium chloride and other ions making sea water a better electrolyte than pure water. These conditions further accelerate the rusting process. The water referred to herein includes both liquid water and water vapour, as water vapour is able to encapsulate ions and gases, and subsequently adhere to the wall surface. The rusting process applies to other metals as well and is more generally termed

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corrosion, although for certain metals the problem is typically less acute due to the possible formation of a protective metal oxide coating, e.g. stainless steel usually contains a protective coating of chromium oxide on the surface that is more resistant to corrosion.

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To reduce corrosion, the wall protection coating of the invention may act as a physical barrier to prevent or reduce the amount of water and oxygen coming in contact with the underlying wall surface.

- 10 Although a paint coating is able to offer a degree of protection to rust formation, rusting of painted surfaces can still occur over time, especially if the protective function of the paint coating has been weakened or damaged by other factors. Some of these factors include abrasion, physical damage, blistering, hygroscopic stresses, UV degradation, biological degradation and other similar factors.

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Briefly, abrasion or physical damage occurs when the painted surface physically contacts with another object that scrapes off part of the paint exposing the painted surface or inner paint layers.

- 20 Blistering occurs when air pockets formed in the painted surface causing the paint to lose adhesion to the surface, i.e. the paint peels more easily. This could be caused by rapid drying of the paint, the surface being painted is wet or dirty, or water seeping through the paint and weakening the paint adhesion.

- 25 Hygroscopic stresses refer to the continual adsorption and desorption of water molecules onto a painted surface over time. This is like a continuous pulling of the painted surface leading to peeling of the paint.

- 30 Biological degradation occurs when microorganisms, like bacteria, fungi and algae, grow on the painted surface and can weaken the chemical bonds in the synthetic polymers of the paint coating.

The protective coating could also prevent contact of fallout (small airborne metal particles) with the paint surface. When the fallout contacts a paint surface, and is not

removed, the metal particles will start to rust and embed themselves in the paint surface, in the process damaging and weakening the paint coating. With the protective coating, the fallout is at most embedded within the protective coating which will eventually be removed.

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Ultraviolet radiation (UV) can be absorbed by organic polymers including certain synthetic polymers found in paint and natural polymers like DNA. The organic polymers are excited by the UV absorption and the excess energy is dissipated by breaking chemical bonds in the organic polymer to produce highly reactive free radicals. The free radicals can react with other polymer molecules, or oxygen in the atmosphere to generate reactive oxygen species, which are even more reactive and react further with the organic polymer. The net result is a chain reaction which damages and alters the properties of the organic polymer over time. Therefore, it is common for paint and sunscreen to contain inorganic and organic UV absorbers to counter the effects of UV radiation. Some common inorganic absorbers are zinc oxide, zinc sulphide, red iron oxide, carbon black and rutile titanium dioxide. Common small molecule organic compounds used as UV absorbers usually have conjugated aromatic systems, and include hydroxy-benzophenone derivatives, substituted cinnamates, and substituted acrylonitrile compounds.

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It is possible that the wall protection coating comprises certain organic compounds in the form of small molecules or polymers that may act as UV absorbers. Another possibility is the coating provides or acts as radical inhibitors to reduce the degradation of the underlying surface.

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The prolonged exposure of synthetic polymers in the paint to an acidic solution may lead to an accelerated deterioration of the painted surface. The compounds in the wall protection coating may serve to neutralise or weaken the acidic solution preserving the underlying surface.

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All of the effects described here weaken the structural integrity and strength of the paint, i.e. it decreases the protective function of the paint coating, leading to peeling and dulling of the painted surface. This will inevitably expose the underlying surface to the elements, and rusting will occur for an iron based surface.

Thus, the wall protection coating may be regarded as providing some form of chemical and or physical protection to the wall surface. The wall protection coating could have other possible protective mechanisms and the possibilities described
5 herein do not serve to limit the coating in any means.

Advantages of the invention include, but are not limited to, the following:

The constituents of the coating composition are organic and biodegradable, and thus
10 are environmentally friendly. The constituents of the coating composition are commonly available and economical (low cost). The coating is non-toxic to human and environment, non-corrosive, non-volatile and non-flammable, and thus provides a safer working environment. The coating can be applied by conventional painting methods, e.g., using an airless spray gun, a painting roller, a painting brush and
15 other commonly employed methods to apply paint onto a surface. In addition, the cured or dried coating is readily removed by high-pressure washing with water. The run off containing the coating is biodegradable and non-toxic to the environment. Therefore, the industrial run-off from the washing can be treated, if required, more easily and at a lower cost compared to treating waste containing synthetic polymers
20 or paint.

The application of the wall protection coating to a wall surface can be performed using existing painting equipment and methods, without the need for specialised
25 equipment.

Other embodiments will be apparent to those skilled in the art from consideration of the specification and practice of the invention. Furthermore, certain terminology has been used for the purposes of descriptive clarity, and not to limit the disclosed
30 embodiments of the invention. The embodiments and features described above should be considered exemplary, with the invention being defined by the appended claims.

Claims

1. A wall protection coating comprising:
a liquid mixture obtained by mixing
at least one gluten-containing flour;
at least one gluten-free flour;
and water,

wherein the liquid mixture is to be applied as a temporary coat to a wall surface and curable by drying to produce a temporary protective coating on the wall surface.

2. The wall protection coating according to claim 1, wherein the liquid mixture is obtained by mixing about 23 to about 27 parts by weight of the at least one gluten-containing flour, about 19 to about 23 parts by weight of the at least one gluten-free flour, and about 50 to about 58 parts by weight of water.

3. The wall protection coating according to any one of the preceding claims, wherein the at least one gluten-containing flour is selected from the group consisting of wheat flour, rye flour, oat flour, barley flour, and hybrids thereof.

4. The wall protection coating according to claim 3, wherein the wheat flour is selected from the group consisting of maida flour, plain flour, all-purpose flour, bread flour, whole wheat flour, and cake flour.

5. The wall protection coating according to any one of the preceding claims, wherein the at least one gluten-free flour is selected from the group consisting of corn flour, tapioca flour, potato flour, rice flour, and wheat starch flour.

6. The wall protection coating according to claim 5, wherein the rice flour is selected from the group consisting of glutinous rice flour, white rice flour, and brown rice flour.

7. The wall protection coating according to any one of claims 1 to 4, wherein the at least one gluten-free flour comprises tapioca flour and white rice flour.

8. The wall protection coating according to claim 1 or 2, wherein the at least one gluten-containing flour is maida flour, and the at least one gluten-free flour is white rice flour.

9. The wall protection coating according to any one of claims 1 to 7, wherein the wall surface is part of a marine structure or marine vessel.

10. An article comprising:

a wall surface; and

a temporary coat applied to the wall surface to provide temporary protection thereto, wherein the temporary coat, before drying, comprises a liquid mixture obtained by mixing

at least one gluten-containing flour;

at least one gluten-free flour;

and water.

11. The article according to claim 10, wherein the temporary coat is applied to a paint coating of the wall surface.

12. The article according to claim 11, wherein the wall surface is part of a marine structure or marine vessel.

13. The article according to claim 12, wherein the marine structure is an oil rig or a platform.

14. The article according to any one of claims 10 to 13, wherein the liquid mixture is obtained by mixing about 23 to about 27 parts by weight of the at least one gluten-containing flour, about 19 to about 23 parts by weight of the at least one gluten-free flour, and about 50 to about 58 parts by weight of water.

15. The article according to any one of claims 10 to 13, wherein the at least one gluten-containing flour is selected from the group consisting of wheat flour, rye flour, oat flour, barley flour, and hybrids thereof.

16. The article according to claim 15, wherein the wheat flour is selected from the group consisting of maida flour, plain flour, all-purpose flour, bread flour, wheat flour, and cake flour.

5 17. The article according to any one of claims 10 to 16, wherein the at least one gluten-free flour is selected from the group consisting of corn flour, tapioca flour, potato flour, rice flour, and wheat starch flour.

18. The article according to claim 17, wherein the rice flour is selected from the
10 group consisting of glutinous rice flour, white rice flour, and brown rice flour.

19. A method for providing temporary protection to a wall surface, the method comprising:

15 providing a flour mixture comprising at least one gluten-containing flour and at least one gluten-free flour;
mixing the flour mixture with water to produce a liquid mixture;
applying the liquid mixture to the wall surface; and
allowing the applied liquid mixture to dry to produce a temporary coat on the wall surface to provide temporary protection thereto.

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20. The method according to claim 19, wherein applying the liquid mixture to the wall surface includes applying the liquid mixture to a paint coating on the wall surface.

25 21. The method according to any one of claims 19 to 20, wherein the liquid mixture comprises about 23 to about 27 parts by weight of the at least one gluten-containing flour, about 19 to about 23 parts by weight of the at least one gluten-free flour, and about 50 to about 58 parts by weight of water.

30 22. The method according to any one of claims 19 to 21, wherein the at least one gluten-containing flour is selected from the group consisting of wheat flour, rye flour, oat flour, barley flour, and hybrids thereof.

23. The method according to claim 22, wherein the wheat flour is selected from the group consisting of maida flour, plain flour, all-purpose flour, bread flour, whole wheat flour and cake flour.

5 24. The method according to any one of claims 19 to 23, wherein the at least one gluten-free flour is selected from the group consisting of corn flour, tapioca flour, potato flour, and rice flour.

10 25. The method according to claim 24, wherein the rice flour is selected from the group consisting of glutinous rice flour, white rice flour, and brown rice flour.

26. The method according to any one of claims 19 to 25, wherein applying the liquid mixture to the wall surface includes applying the liquid mixture to the wall surface by an airless spray gun, paint roller, or paint brush.

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27. The method according to any one of claims 19 to 26, wherein the wall surface is part of a marine superstructure or marine vessel.

20 28. The method according to any one of claims 19 to 27, further comprising:
removing, by using pressured water, the temporary coat to reveal the wall surface.

25 29. The method according to any one of claims 19 to 28, wherein providing a flour mixture comprising at least one gluten-containing flour and at least one gluten-free flour includes mixing the at least one gluten-containing flour and the at least one gluten-free flour.