[0008]

Accordingly, the invention provides the following waterproof sheet and waterproofing method.

According to a first aspect, there is provided a waterproof sheet comprising a base material layer and a pressure-sensitive adhesive layer formed on one side of the base material layer, wherein the base material layer comprises a rubber sheet reinforced with a reinforcing fiber layer and has a tensile strength of at least 15 MPa and a tear strength of at least 30 kN/m, and the pressure-sensitive adhesive layer has a hardness, as measured with an Asker C durometer, of 15 or less, wherein the rubber sheet that forms the base material layer is made of a cured silicone rubber composition and the reinforcing fiber layer is embedded in the rubber sheet.

The waterproof sheet as disclosed, wherein the rubber sheet that forms the base material layer is made of a cured silicone rubber composition and the reinforcing fibers are of at least one type selected from the group consisting of glass fibers, carbon fibers, aramid fibers and silicon carbide fibers.

The waterproof sheet as disclosed, wherein the reinforcing fiber layer is a plain-weave or satin-weave layer having a yarn count for both warp and weft of from 5 to 600 tex, a density of from 10 to 150 yarns/25 mm, a thickness of from 0.02 to 0.6 mm and a tension of at least 70 N/25 mm, and the sheet has a total light transmittance of from 50 to 99%.

The waterproof sheet as disclosed, wherein the base material layer comprises a reinforcing fiber layer buried in a silicone rubber sheet and is obtained by applying a silicone rubber composition to each of the two sides of a cloth of reinforcing fibers and curing the rubber composition, which base material layer has a displacement when pulled in the surface direction of less than 5 mm at 25°C and has a thickness of from 0.2 to 3 mm.

The waterproof sheet as disclosed, wherein the pressure-sensitive adhesive layer is the cured form of an addition reaction-curable silicone composition, which cured composition has a hardness, as measured with an Asker C durometer, of not more than 15 and has a tack strength to a mortar test piece of at least 5 N/25 mm.

The waterproof sheet as disclosed wherein, one hour after attaching to a mortar test piece the waterproof sheet having a pressure-sensitive adhesive layer formed on the base material layer, the mortar test piece has a displacement when pulled in the surface direction of at least 10 mm.

The waterproof sheet as disclosed, wherein the base material layer has a thickness of from 0.2 to 3 mm, the pressure-sensitive adhesive layer has a thickness of from 0.5 to 3 mm, the waterproof sheet has an overall thickness of from 0.7 to 6 mm, the

CLAIMS:

1. A waterproof sheet comprising a base material layer and a pressure-sensitive adhesive layer formed on one side of the base material layer, wherein the base material layer comprises a rubber sheet reinforced with a reinforcing fiber layer and has a tensile strength of at least 15 MPa and a tear strength of at least 30 kN/m, and the pressure-sensitive adhesive layer has a hardness, as measured with an Asker C durometer, of 15 or less,

wherein the rubber sheet that forms the base material layer is made of a cured silicone rubber composition and the reinforcing fiber layer is embedded in the rubber sheet.

2. The waterproof sheet of claim 1, wherein the reinforcing fibers are of at least one type selected from the group consisting of glass fibers, carbon fibers, aramid fibers and silicon carbide fibers.

3. The waterproof sheet of claim 1 or 2, wherein the reinforcing fiber layer is a plain-weave or satin-weave layer having a yarn count for both warp and weft of from 5 to 600 tex, a density of from 10 to 150 yarns/25 mm, a thickness of from 0.02 to 0.6 mm and a tension of at least 70 N/25 mm, and the sheet has a total light transmittance of from 50 to 99%.

4. The waterproof sheet of any one of claims 1 to 3, wherein the base material layer comprises a reinforcing fiber layer buried in a silicone rubber sheet and is obtained by applying a silicone rubber composition to each of the two sides of a cloth of reinforcing fibers and curing the rubber composition, which base material layer has a displacement when pulled in the surface direction of less than 5 mm at 25°C and has a thickness of from 0.2 to 3 mm.

5. The waterproof sheet of any one of claims 1 to 4, wherein the pressure-sensitive adhesive layer is the cured form of an addition reaction-curable silicone composition, which cured composition has a hardness, as measured with an Asker C durometer, of not more than 15 and has a tack strength to a mortar test piece of at least 5 N/25 mm.