Claims

1. A device for providing support to a solar panel assembly, comprising:

a housing provided with a recess and an opening, the housing containing a fluid, a Superabsorbent Polymer (SAP) and one or more minerals received through the opening,

wherein the mass ratio of the fluid to the polymer is between 125:1 and 160:1.

2. The device of claim 1, wherein the polymer is configured to absorb the fluid in the housing to form a stable gel.

3. The device of claim 1 or 2, wherein the SAP is sodium polyacrylate.

4. The device of any of the preceding claims, wherein the fluid is water.

5. The device of any of the preceding claims. wherein the mass ratio of the fluid to the polymer is 150:1.

6. The device of any of the preceding claims, wherein the housing is made of unplasticized Polyvinyl Chloride (uPVC).

7. The device of any of the preceding claims, wherein the one or more minerals are waste stones, rocks, gravel or any combination thereof.

8. The device of any of the preceding claims, wherein the housing has a mass and a volume and wherein for a predetermined mass of the housing, the volume of the housing is configured to decrease by increasing the mass of the minerals in the housing.

9. The device of any one of claims 2 to 8, wherein the housing is configured to receive a sodium compound, such that the minerals and the liquefied polymer chemically react with the sodium compound to release the fluid that has been absorbed by the polymer.

10. The device of any one of claims 2 to 8, wherein the housing is configured to receive water such that the liquefied polymer reacts with the water to release the fluid that has been absorbed by the polymer.

11. Use of a device according to any of the preceding claims for providing support to a solar panel assembly.

12. A method of assembling the device of claims 1 to 10, comprising the steps of:

filling the housing with a predetermined amount of water;

adding a superabsorbent polymer and one or more minerals through the opening;

allowing the water, the superabsorbent polymer and the one or more minerals to mix; and

sealing the opening of the housing.

14. A method of disassembling the device of claims 1 to 10, comprising the steps of:

unsealing the opening of the housing;

flushing the liquefied polymer with water;

pumping the fluid that has been released, out of the housing; and

drying the polymer, minerals and the housing.