CLAIMS

1. A building panel comprising:

at least one mat having an interior and an exterior surface;

a set gypsum core bonded to the interior surface of the mat;

a polyester film having an interior and an exterior surface;

an adhesive adhering the interior surface of the polyester film to the exterior surface of the mat, whereby the polyester film is bonded to the at least one mat, the adhesive including an outer stratum substantially free of the material that makes up the mat.

2. The building panel as described in Claim 1 wherein the building panel comprises upper and lower mats that are each formed from randomly aligned inorganic fibers held together by a binder.

3. The building panel as described in Claim 1 wherein the portion of the set gypsum core proximate the mat has a density that is greater than the remainder of the set gypsum core.

4. The building panel as described in Claim 1 wherein the interior surface of the polyester film is modified to improve adhesive bonding.

5. The building panel as described in Claim 4 wherein the interior surface of the polyester film is modified via a corona treatment

6. The building panel as described in Claim 4 wherein the interior surface of the polyester film is modified via a flame treatment.

7. The building panel as described in Claim 1 wherein the adhesive is a hot melt polymer adhesive.

8. The building panel as described in Claim 1 further comprising an acrylic coating applied to the exterior surface of the polyester film, the acrylic coating providing a surface finish to the building panel.

9. The building panel as described in Claim 1 wherein the polyester film is a polyethylene terephthalate (PET) film.

10. The building panel as described in Claim 1 wherein the polyester film is perforated.

11. The building panel as described in Claim 1 wherein the core includes high levels of fiber and starch.

12. The building panel as described in Claim 11 wherein the fibers comprise more than 1% of the core weight.

13. The building panel as described in Claim 11 wherein the starch comprises more than 1% of the core weight.

14. The building panel as describe in Claim 11 wherein a synthetic polymer is used in lieu of the starch.

15. The building panel as described in Claim 1 wherein the core comprises set gypsum.