CLAIMS

1. A retaining ring for a polishing system, the retaining ring comprising:

a ring-shaped body having a top surface, an inside diameter sidewall, an outer diameter sidewall and a bottom surface, the inside diameter side wall configured to circumscribe a substrate; wherein the ring shaped body comprises:

a rigid ring-shaped portion;

a polymeric ring-shaped portion stacked on the rigid ring-shaped portion and covering at least three sides of the rigid ring-shaped portion;

a plurality of grooves formed in the bottom surface, and

a plurality of wash ports formed through the polymeric ring-shaped portion, wherein the wash ports are isolated from the rigid ring-shaped portion by a polymeric material continuous with the polymeric ring-shaped portion.

2. The retaining ring of claim 1, wherein the wash ports are non-perpendicular relative to a centerline of the ring-shaped body.

3. The retaining ring of claim 1, wherein the polymeric ring-shaped portion comprises:

protrusions extending into the rigid ring-shaped portion, the wash ports formed through the protrusions.

4. The retaining ring of claim 3, wherein an inside diameter of the wash ports are covered by the polymeric ring-shaped portion, the polymeric ring-shaped portion comprised by the polymeric material.

5. The retaining ring of claim 1, wherein the rigid ring-shaped portion is completely encapsulated by the polymeric ring-shaped portion, the polymeric ring-shaped portion comprised by the polymeric material.

6. The retaining ring of claim 1 further comprising:

a polymeric coating formed in an inside diameter of the wash ports, the polymeric coating isolating the rigid ring-shaped portion from the wash ports, the polymeric coating comprised by the polymeric material.

7. A retaining ring for a polishing system, the retaining ring comprising:

a ring-shaped body having a top surface, an inside diameter sidewall, an outer diameter sidewall and a bottom surface, the inside diameter side wall configured to circumscribe a substrate; wherein the ring shaped body comprises:

a metal ring-shaped portion;

a polymeric ring-shaped portion covering the exterior of the rigid ring-shaped portion;

a plurality of grooves formed in the bottom surface of the ring-shaped body, and

a plurality of wash ports formed through the polymeric ring-shaped portion, wherein the wash ports are isolated from the metal ring-shaped portion by a polymeric material continuous with the polymeric ring-shaped portion.

8. The retaining ring of claim 7, wherein the wash ports are non-perpendicular relative to a centerline of the ring-shaped body.

9. The retaining ring of claim 7, wherein the polymeric ring-shaped portion comprises:

protrusions extending into the metal ring-shaped portion, the wash ports formed through the protrusions.

10. The retaining ring of claim 9, wherein an inside diameter of the wash ports are covered by the polymeric ring-shaped portion, the polymeric ring-shaped portion comprised by the polymeric material.

11. The retaining ring of claim 7, wherein the metal ring-shaped portion is completely encapsulated by the polymeric ring-shaped portion, the polymeric ring-shaped portion comprised by the polymeric material.

12. The retaining ring of claim 7 further comprising:

a polymeric coating formed in an inside diameter of the wash ports, the polymeric coating isolating the metal ring-shaped portion from the wash ports, the polymeric coating comprised by the polymeric material.

13. The retaining ring of claim 7, wherein the metal ring-shaped portion is fabricated from stainless steel.

14. The retaining ring of claim 13, wherein the polymeric ring-shaped portion is fabricated at least one of polyphenylene sulfide (PPS), polyethylene terephthalate, polyetheretherketone, and polybutylene terephthalate.