WHAT IS CLAIMED IS:

1. A flushing fixture adapted for cleaning a backing plate, or an electrode assembly including the backing plate and an electrode plate, for a plasma processing chamber, the flushing fixture comprising:

a base plate comprising a recessed inner portion including an upper surface, an outer portion, a lower surface, a plurality of liquid passages extending between the upper surface and the lower surface, the upper surface configured to support the backing plate or the electrode assembly; and

a cover plate configured to cover the base plate when the backing plate or electrode assembly is supported on the upper surface of the base plate, the cover plate including at least one liquid passage through which a flushing liquid is introduced into an interior of the flushing fixture defined by the base plate and cover plate, the flushing liquid passes through gas passages in the backing plate, or through gas passages in the backing plate and electrode plate of the electrode assembly, and exits the flushing fixture through the liquid passages in the base plate.

2. The flushing fixture of Claim 1, wherein the base plate comprises a plurality of circumferentially spaced alignment holes provided in the outer portion, and the cover plate includes a plurality of alignment pins each of which is sized to be received in an alignment hole of the base plate when the cover plate is positioned to cover the base plate.

3. The flushing fixture of Claim 1, further comprising:

(a) an adapter ring configured to be positioned between the cover plate and base plate and to contact the cover plate and a surface of backing plate to prevent the surface of the backing plate from contacting the cover plate and/or

(b) an O-ring adapted to provide a liquid seal between the cover plate and the backing plate or the electrode assembly when supported on the upper surface of the base plate.

4. The flushing fixture of Claim 1, wherein the base plate comprises a recessed inner portion including an upper surface, an outer portion, a lower surface, a plurality of liquid flow passages extending between the upper surface and the lower surface.

5. The flushing fixture of Claim 4, wherein the base plate comprises a plurality of circumferentially spaced alignment holes provided in the outer portion, and the cover plate

includes a plurality of alignment pins each of which is sized to be received in an alignment hole of the base plate when the cover plate is positioned to cover the base plate.

What is claimed is:

1. A flushing fixture adapted for cleaning a backing plate, or a showerhead electrode assembly including the backing plate and an electrode plate, for a plasma processing chamber, the flushing fixture comprising:

a base plate comprising a recessed inner portion including an upper surface, an outer portion, a lower surface, a plurality of liquid passages extending between the upper surface and the lower surface, the upper surface configured to support the backing plate or the showerhead electrode assembly; and

a cover plate configured to cover the base plate and enclose the backing plate or showerhead electrode assembly when the backing plate or showerhead electrode assembly is supported on the upper surface of the base plate, the cover plate including at least one liquid passage through which a flushing liquid is introduced into an interior of the flushing fixture defined by the base plate and cover plate, the flushing liquid passes through gas passages in the backing plate, or through gas passages in the backing plate and electrode plate of the showerhead electrode assembly, and exits the flushing fixture through the liquid passages in the base plate.

2. The flushing fixture of claim 1, wherein the base plate comprises a plurality of circumferentially spaced alignment holes provided in the outer portion, and the cover plate includes a plurality of alignment pins each of which is sized to be received in an alignment hole of the base plate when the cover plate is positioned to cover the base plate.

3. The flushing fixture of claim 1, further comprising: (a) an adapter ring configured to be positioned between the cover plate and base plate and to contact the cover plate and a surface of the backing plate to prevent the surface of the backing plate from contacting the cover plate and/or (b) an O-ring adapted to provide a liquid seal between the cover plate and the backing plate or the showerhead electrode assembly when supported on the upper surface of the base plate.

4. The flushing fixture of claim 2, wherein the alignment pins are comprised of polytetrafluorethylene.

5. The flushing fixture of claim 1, wherein the cover plate is circular and comprises a plurality of cut-outs formed in an outer portion thereof, each of the cut-outs configured to receive a fastener of a latch supported on the base plate to secure the cover plate to the base plate.

6. The flushing fixture of claim 1, wherein an outer portion of the cover plate includes a groove and an O-ring in the groove which provides a liquid seal between the cover plate and the backing plate.

7. The flushing fixture of claim 1, wherein the base plate and the cover plate are circular and made of a polymeric material.

8. The flushing fixture of claim 7, wherein the polymeric material is polyetherimide.

9. The flushing fixture of claim 1, wherein the upper surface of the base plate comprises a first annular projection, a second annular projection located radially outward from the first annular projection, and a plurality of circularly-spaced liquid passages located between the first annular projection and the second annular projection.

10. The flushing fixture of claim 9, wherein the upper surface of the base plate further comprises a plurality of circularly-spaced liquid passages located between the second annular projection and the outer portion of the base plate.

11. The flushing fixture of claim 1, wherein the outer portion of the base plate comprises a plurality of circularly-spaced latches.

12. The flushing fixture of claim 11, wherein the latches are recessed and include a fastener.

13. The flushing fixture of claim 1, wherein the cover plate comprises a recessed inner portion adapted to overlie the inner portion of the base plate and an outer portion adapted to overlie the outer portion of the base plate.

14. The flushing fixture of claim 13, wherein the inner portion of the cover plate comprises at least one liquid passage through which a flushing liquid is introduced.

15. The flushing fixture of claim 1, wherein the flushing fixture comprises an enclosure on a top surface of the cover plate, the enclosure including a single fluid passage adapted to supply flushing liquid to liquid passages in the top surface of the cover plate defining a plenum provided on a top surface of the cover plate.

16. The flushing fixture of claim 15, wherein the enclosure comprises a fluid passage for connection to a liquid supply line.

17. The flushing fixture of claim 1, wherein the base plate includes handles provided on the outer portion.

18. The flushing fixture of claim 1, wherein an adapter ring is adapted to overly the backing plate, and an O-ring on the cover plate contacts the adapter ring.