PERFLUOROPOLYETHER LIQUID PELLICLE AND METHODS OF CLEANING MASKS USING PERFLUOROPOLYETHER LIQUID

ABSTRACT

A patterning device, for example a mask, for use in a photolithographic apparatus includes a blank layer, a layer of patterned opaque material on a surface of the blank layer and a pellicle of perfluoropolyether (PFPE) liquid that covers the surface. A method of manufacturing a patterning device includes providing a patterning device having a blank layer and a patterned layer of opaque material on a surface of the blank layer, applying PFPE liquid to the surface that covers the surface to form a PFPE liquid layer, and removing at least a portion of the PFPE liquid layer. A method of cleaning a patterning device for use in photolithographic projection apparatus, the patterning device including a blank layer and a patterned layer of opaque material on a surface of the blank layer, the method including applying PFPE liquid to the surface of the blank layer that covers the surface to form a PFPE liquid layer and removing at least a portion of the PFPE liquid layer.

Figure 3