**List of Tables:**

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| --- | --- | --- | --- | --- | --- | --- |
| TABLE 1.Composition of ceramic support and composite membrane. | | | | | | |
| **Composition of ceramic support** | | | | | | |
| **Components** | Fly ash | Fuller clay | Kaolin | Boric acid | Sodium metasilicate | Sodium carbonate |
| **Wt % (dry basis)** | 72 | 8 | 15 | 1.25 | 1.25 | 2.5 |
| **Composition of CM** | | | | | | |
| **CM** | PF0 | PF1 | PF2 | PF3 | PF4 | PF5 |
| **PVA (gm)** | 10 | 10 | 10 | 10 | 10 | 10 |
| **Water (gm)** | 90 | 90 | 90 | 90 | 90 | 90 |
| **Formaldehyde (gm)** | 0 | 1 | 2 | 3 | 4 | 5 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TABLE 2.Physiochemical properties of composite membrane. | | | | | | | | |
| **Parameter** | | **Support** | **PF0** | **PF1** | **PF2** | **PF3** | **PF4** | **PF5** |
| Avg pore size (nm) | | 14 | 14 | 3.59 | 2.77 | 1.91 | **-** | **-** |
| Active layer thickness (mm) | | - | 0.8 | . 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Pure water flux (l.m-2.h-1) | | 325 | 202.37 | 84.4 | 47.99 | 5.56 | 0 | 0 |
| Contact angle (°) | | - | 32.44 | 39.48 | 46.93 | 52.02 | 57.12 | 63.92 |
| Chemical stability (wt.loss%) | pH 2 | - | Not stable | 1.08 | 1.2 | 1.49 | 1.62 | 1.67 |
| pH 12 | - | Not stable | 0.18 | 0.11 | 0.35 | 0.061 | 0,06 |