



*Saves Past...  
Protects Future...*

# Monarch Industrial Products (I) Pvt. Ltd.

(An ISO 9001 : 2008, ISO 14001 : 2004 & OHSAS 18001 : 2007 Certified Company)

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## TYPICAL PROPERTIES

| Properties               | Standard       | Unit   | GENERAL PURPOSE                    |                                    |                                    |                                   |  | SPECIAL PURPOSE                           |   |   |   |                                   | HIGH TEMPERATURE<br>PUTTIES TILL 220°C |                                     | UNDER PRESSURE LEAK<br>ARREST PUTTIES |  |
|--------------------------|----------------|--|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|---|---|---|---|-----------------------------------|--|-------------------------------------|---------------------------------------|--|
|                          |                |  | SavesPast<br>TP                    | SavesPast<br>SP                    | SavesPast<br>CP                    | SavesPast<br>CCP                  | SavesPast<br>FP                              | SavesPast<br>AP                           | SavesPast<br>BP                           | SavesPast<br>CUP                          | SavesPast<br>SSP                          | SavesPast<br>HTCP                 | SavesPast<br>HTAP                      | Zero-Down-Time<br>ETP               | Zero-Down-Time<br>UWP                 |  |
| Color and appearance     | ASTM D 1544    | ~  | Thick paste & Metallic grey        | Thick paste & steel black          | Thick paste & Dark Grey            | Thick paste & Dark Grey           | Thick paste & Black                          | Thick paste & Aluminium                   | Thick paste & Bronze                      | Thick paste & Copper                      | Thick paste & Grey                        | Thick paste & Grey                | Thick paste & Aluminium                | Thick paste & Dark Grey             | Thick paste & Black                   |  |
| Specific gravity         | ASTM D 1475-98 | ~  | 2.08                               | 2.0-2.5                            | 1.75                               | 2.1                               | 1.05   | 1.58                                      | 2.23                                      | 2.1                                       | 2.24                                      | 1.94                              | 1.58                                   | 1.3                                 | 1.5                                   |  |
| Mix ratio by weight      | Manual         | ~  | 4(R):1(H)                          | 4(R):1(H)                          | 9(R):1(H)                          | 4(R):1(H)                         | 2(R):1(H)                                    | 9(R):1(H)                                 | 1(R):1(H)                                 | 4(R):1(H)                                 | 4(R):1(H)                                 | 13.1(R):1(H)                      | 13.1(R):1(H)                           | 1(R):1(H)                           | 1(R):1(H)                             |  |
| Mix ratio by volume      | Manual         | ~  | 7(R):1(H)                          | 4.5(R):1(H)                        | 4(R):1(H)                          |                                   | 2(R):1(H)                                    | 4(R):1(H)                                 | 2(R):1(H)                                 | 4(R):1(H)                                 | 3.(R):1(H)                                | 6(R):1(H)                         | 4(R):1(H)                              | 1(R):1(H)                           | 1.4 (R):1(H)                          |  |
| Viscosity                | ASTM D 1200    | min  | Putty                              | Putty                              | Putty                              | Putty                             | Putty  | Putty                                     | Putty                                     | Putty                                     | Putty                                     | Putty                             | Putty                                  | Putty                               | Putty                                 |  |
| Pot life @ 30°C          | IS 101         | min  | 25                                 | 20-25                              | 60                                 | 30                                | 10   | 60  | 35  | 50  | 58  | 120                               | 60                                     | 3                                   | 30                                    |  |
| Functional cure          | ASTM D 1640    | Hrs  | 24                                 | 24                                 | 16                                 | 16                                | 16   | 16  | 16  | 24  | 16  | 16                                | 16                                     | 6                                   | 16                                    |  |
| Chemical resistance      | ASTM C 267     | %  | Excellent                          | Excellent                          | Excellent                          | Excellent                         | Excellent                                    | Excellent                                 | Excellent                                 | Excellent                                 | Excellent                                 | Excellent                         | Excellent                              | Excellent                           | Excellent                             |  |
| Salt Spary Test          | ASTM B 117     | Hrs  | 5000                               | 5000                               | 5000                               | 6000                              | 6000   | 6000                                      | 6000                                      | 6000                                      | 7000                                      | 5000                              | 5000                                   | 5000                                | 5000                                  |  |
| Voc content              | ASTM D 1353    | %  | Nil                                | Nil                                | Nil                                | Nil                               | Nil  | Nil                                       | Nil                                       | Nil                                       | Nil                                       | Nil                               | Nil                                    | Nil                                 | Nil                                   |  |
| Compressive strength     | ASTM D 695     | N/mm <sup>2</sup>                            | 120                                | 120                                | 68                                 | 88                                | 21   | 58.05                                     | 58.8                                      | 58.05                                     | 58  | 71                                | 58.05                                  | 25                                  | 40                                    |  |
| Tensile strength         | ASTM D 638     | N/mm <sup>2</sup>                            | 35                                 | 35                                 | 18                                 | 19                                | 17   | 27  | 27  | 25.5                                      | 27  | 30                                | 27                                     | 35                                  | 27                                    |  |
| Flexural strength        | ASTM D 790     | N/mm <sup>2</sup>                            | 50                                 | 50                                 | 50                                 | 55                                | NA   | 46.61                                     | 42.6                                      | 46.61                                     | 36  | 45                                | 46.61                                  | 50                                  | 48.2                                  |  |
| Adhesive shear strength  | ASTM D 1002    | N/mm <sup>2</sup>                            | 14                                 | 14                                 | 18                                 | 16.5                              | 16   | 17.9                                      | 18.4                                      | 18.2                                      | 16  | 15.85                             | 17.9                                   | 14                                  | 19                                    |  |
| Abrsion resistance       | ASTM D 4060    | mg/<br>1000 cycles                           | 120                                | 125                                | 85                                 | 70                                | 140  | 100                                       | 100                                       | 120                                       | 135                                       | 90                                | 90                                     | 150                                 | 140                                   |  |
| Cured hardness           | ASTM D 2240    | Shore D                                      | 80                                 | 85                                 | 85                                 |                                   | 78   | 85  | 85  | 80  | 85  | 87                                | 85                                     | 70                                  | 75                                    |  |
| Coverage @ 5mm thickness | ~              | cm <sup>2</sup> /<br>pack size/<br>thickness | 796 Cm <sup>2</sup> /<br>kg / 5 mm | 770 Cm <sup>2</sup> /<br>kg / 5 mm | 862 Cm <sup>2</sup> /<br>kg / 5 mm | 800Cm <sup>2</sup> /<br>kg / 5 mm | 1016 Cm <sup>2</sup> /<br>0.5 kg /<br>2.5 mm | 597 Cm <sup>2</sup> /<br>0.5 kg /<br>5 mm | 428 cm <sup>2</sup> /<br>0.5 kg /<br>5 mm | 597 Cm <sup>2</sup> /<br>0.5 kg /<br>5 mm | 428 Cm <sup>2</sup> /<br>0.5 kg /<br>5 mm | 624 Cm <sup>2</sup> /<br>kg / 5mm | 624 Cm <sup>2</sup> /<br>kg / 5 mm     | 1100 Cm <sup>2</sup> /<br>kg / 5 mm | 862 Cm <sup>2</sup> /<br>kg / 5 mm    |  |
| Cured shrinkage          | ASTM D 2566    | cm/ cm                                       | 0.001                              | 0.001                              | 0.005                              | 0.005                             | 0.3  | 0.005                                     | 0.002                                     | 0.002                                     | 0.001                                     | 0.001                             | 0.002                                  | 0.001                               | 0.005                                 |  |
| Di electric strength     | ASTM D 149     | kv/mm  | 2.206                              | 1.18                               | 15.7                               | 16.5                              | 13.79  | 3.94                                      | 0.78                                      | 3.94                                      | 1.2                                       | 12                                | 3.94                                   | 1.18                                | 5.9                                   |  |
| Di electric constant     | ASTM D 150     | ~  | 44.8                               | 67.5                               | 55                                 | 56                                | 10   | 21.4                                      | 75  | 22  | 75  | 10                                | 21.4                                   | 35                                  | 35                                    |  |
| Thermal conductivity     | ASTM C 117     | W/mk   | 0.69                               | 0.5                                | 0.58                               |                                   | 0.18   | 0.55                                      | 0.55                                      | 0.4                                       | 0.55                                      | 0.69                              | 0.6                                    | 0.2                                 | 0.3                                   |  |
| Temperature resistance   | Dry            | ° C  | 170                                | 120                                | 120                                | 121                               | 80   | 121                                       | 121                                       | 120                                       | 121                                       | 230                               | 230                                    | 37                                  | 120                                   |  |
|                          | Wet            |  | 85                                 | 60                                 | 60                                 | 49                                | 40   | 60  | 60  | 60  | 60  | 115                               | 115                                    | 17                                  | 60                                    |  |