

## Melicbond Technical Data Sheet

Quality results as per GB/T17748-1999

1. Outsidual - 2. Fireproof Panel - 3. Insidewall - 4. Fireproof Panel

| Outsidual                |  |   |            |
|--------------------------|--|---|------------|
| Items                    | Standard index of quality product                          | Result  | Conclusion |
| Appearance               | Clean surface without swell, flaws, scrath and aberration  | pass  | Qualified  |
|                          | Length: $\pm 3\text{mm}$                                   | 0mm~+2mm  |            |
|                          | Width: $\pm 2\text{mm}$                                    | 0mm~+1mm  |            |
|                          | Thickness: 0.2mm   | 0mm~+0.14mm   |            |
| Deviation of dimension   | Deviation of diagonal: $\leq 5\text{mm}$                   | 1mm   | Qualified  |
|                          | Out of straight at sides: $\leq 1\text{mm/m}$              | 0.2mm/m   |            |
|                          | Warp: $\leq 5\text{mm/m}$                                  | 1mm/m   |            |
| Thickness of coating     | $\geq 25\mu\text{m}$                                       | 29u ( av.30 )   | Qualified  |
| Deviation of luster      | $\leq 10$  | 2.1 ( av.28.0 )   | Qualified  |
| Hardness of pencil       | $\geq \text{HB}$   | 3H  | Qualified  |
| Toughness of coating     | $\leq 2\text{T}$   | 2T  | Qualified  |
| Adhesive                 | Not less than Grade1                                       | Squaring off method of Grade 0 Grade 1 marking method of rolling line | Qualified  |
| Impact strength          | 50Kg.cm Without paint off and crack                        | Pass  | Qualified  |
| Boiling water resistance | (Boiling for 2h without change)                            | Unchanged   | Qualified  |
| Acid resistance          | Immerse surface with 5% HCl(v/v) for 48h without change    | Unchanged   | Qualified  |
| Alkali resistance        | Immerse surface with 5% NaOH(m/m)for 48h without change    | Unchanged   | Qualified  |
| Oil resistance           | Immerse surface with 20# engine oil for 48h without change | Unchanged   | Qualified  |
| Solvent resistance       | Clean 100 times with butanone without change               | Bottom unrevealed   | Qualified  |
| Cleaning resistance      | $\geq 10.000$ times without change                         | Unchanged   | Qualified  |

|  |   |  |           |
|--|---|--|-----------|
| Abrasion resistance                    | >= 5L/um                                  | 5.33L/um                               |           |
| Contamination resistance               | <= 15%                                    | 7.8%                                   |           |
| Density of surface                     | Specified value: ± 0.5Kg/m2               | 5.32Kg/m2                              | Qualified |
| Bend strength                          | >= 100Mpa                                 | 121Mpa                                 | Qualified |
| Flexuuous modulus of elasticity        | >= 2.0×10 <sup>4</sup> Mpa                | 3.12 × 10 <sup>4</sup> Mpa             | Qualified |
| Through resistance                     | >= 9.0kN                                  | 9.94kN                                 | Qualified |
| Cutting strenght                       | >= 28.0Mpa                                | 32.0Mpa                                | Qualified |
| 180° peel strength                     | >= 7.0N/mm                                | 11.2N/mm                               | Qualified |
| Resistance to change of temperature    | -40°C~80°C 20 cycles without change       | Unchanged                              | Qualified |
| Heat deformation temperature           | >= 95°C                                   | 120°C                                  | Qualified |
| Coefficient of heat expansion          | <= 4.00×10 <sup>-5</sup> °C <sup>-1</sup> | 1.98×10 <sup>-5</sup> °C <sup>-1</sup> | Qualified |
| Salt haze resistance                   |   |  |           |
| 3000h                                  | Not less than Grade 2                     | Grade 1                                | Qualified |
| 2000h Artificial resistance aberration | <= 3.0                                    | 1.24                                   | Qualified |
| Aging resistance Out of light          | Not less than Grade 2                     | Grade 1                                | Qualified |
| Other aging characteristic             | Grade 0                                   | Grade 0                                | Qualified |

The test result meets the index requirements of quality product of GB/T17748-1999 and the products sampled are regarded as quality products.

| Fireproof Panel                                 |             |                 |        |            |
|---|-------------|-----------------|--------|------------|
| Items   | Test method | Technical index | Result | Conclusion |
| Minimum value of remaining length after burning | GB/T8625-88 | > 0             | 410    | Qualified  |
| Average value of remaining length after burning | GB/T8625-88 | >= 150          | 486    | Qualified  |
| Temperature of smoke, °C                        | GB/T8625-88 | <= 200          | 116    | Qualified  |
| Height of the top of the flame,mm               | GB/T8626-88 | < 150           | 15     | Qualified  |
| Grade of smoke density                          | GB/T8627-88 | <= 75           | 34     | Qualified  |

**Note:** The technical index based on the regulation of unflammmable materials ( Grade B1 ) of GB8624-1997

**Conclusion of test:** Test proved that all indices of the material meet the standard requirements of regulation on unflammmable materials. It's judged in accordance with GB8624-1997 than the inflammmability of this material has reached standard of GB8624, Gread 1.

| Insidewall                     |  |  |            |
|--------------------------------|--|--|------------|
| Items                          | Standard index of quality product                          | Result   | Conclusion |
| Appearance                     | Clean surface without swell,flaws.scrath and aberration    | pass   | Qualified  |
|                                | Length: ± 3mm  | 0mm~+1mm   |            |
|                                | Width: ± 2mm   | 0mm~+1mm   |            |
|                                | Thickness: ±0. 2mm   | 0mm~+0.14mm  |            |
| Deviation of dimension         | Deviation of diagonal: <= 5mm                              | 0mm  | Qualified  |
|                                | Out of straight at sides: <= 1mm/m                         | 0.2mm/m  |            |
|                                | Warp: <= 5mm/m   | 1mm/m  |            |
| Thickness of coating           | >= 16um  | 17um ( av.18 )   | Qualified  |
| Deviation of luster            | <= 10  | 2.6 ( av.20 )  | Qualified  |
| Hardness of pencil             | >= HB  | 2H   | Qualified  |
| Toughness of coating           | <= 3T  | 1T   | Qualified  |
| Adhesive                       | Not less than Grade 1                                      | Squaring off method of Grade 0<br>Grade 1 marking method of rolling line | Qualified  |
| Impact strength                | 50Kg.cm Without paint off and crack                        | Pass   | Qualified  |
| Boiling water resistance       | (Boiling for 2h without change)                            | nchanged   | Qualified  |
| Acid resistance                | Immerse surface with 2% HCl (v/v)for 24H without change    | Unchanged  | Qualified  |
| Alkali resistance              | Immerse surface with 2% NaOH (m/m) for 24h without change  | Unchanged  | Qualified  |
| Oil resistance                 | Immerse surface with 20# engine oil for 24h without change | Unchanged  | Qualified  |
| Solvent resistance             | Clean 100 times with dimethylbenzene without change        | Bottom unrevealed  | Qualified  |
| Cleaning resistance            | >= 10000 times without change                              | Unchanged  | Qualified  |
| Abrasion resistance            | Specified value: ± 0.5Kg/m2                                | 3.63Kg/m2  | Qualified  |
| Density of surface             |  |  |            |
| Bend strength                  | >= 60Mpa   | 79.6Mpa  | Qualified  |
| Flexuous modulus of elasticity | >= 1.5×10 <sup>4</sup> Mpa                                 | 2.19×10 <sup>4</sup> Mpa   | Qualified  |
| Through resistance             | >= 5.0kN   | 6.25kN   | Qualified  |

|                                     |  |                                     |           |
|-------------------------------------|--|-------------------------------------|-----------|
| Cutting strength                    | $\geq 20.0\text{Mpa}$                    | 25.7Mpa                             | Qualified |
| 180° peel strength                  | $\geq 5.0\text{N/mm}$                    | 6.2N/mm                             | Qualified |
| Resistance to change of temperature | -40°C~80°C 20 cycles without change      | Unchanged                           | Qualified |
| Heat deformation temperature        | $\geq 95\text{°C}$                       | 116°C                               | Qualified |
| Coefficient of heat expansion       | $\leq 4.00 \times 10^{-5}\text{°C}^{-1}$ | $2.47 \times 10^{-5}\text{°C}^{-1}$ | Qualified |

The test result meets the index requirements of quality product of GB/T17748-1999 and the products sampled are regarded as quality products.

| <b>Fireproof Panel</b>              |  |                                     |                            |
|-------------------------------------|--|-------------------------------------|----------------------------|
| <b>Items</b>                        | <b>Standard Index</b>                    | <b>Test Value</b>                   | <b>Individual Judgment</b> |
| Density of surface                  | Rating: $\pm 0.5\text{Kg/m}^2$           | 68Kg/m <sup>2</sup>                 | Qualified                  |
| Impact strength                     | 50Kg.cm Without paint off and crack      |                                     | Qualified                  |
| Bend strength                       | $\geq 100\text{ Mpa}$                    | 104 Mpa                             | Qualified                  |
| Flexuous modulus of elasticity      | $\geq 2.00 \times 10^4\text{ Mpa}$       | $3.04 \times 10^4\text{ Mpa}$       | Qualified                  |
| Through resistance                  | $\geq 9.0\text{kN}$                      | 9.50kN                              | Qualified                  |
| Cutting strength                    | $\geq 28.0\text{Mpa}$                    | 29.6Mpa                             | Qualified                  |
| 180° peel strength                  | $\geq \square 7.0\text{N/mm}$            | 7.1N/mm                             | Qualified                  |
| Resistance to change of temperature | -40°C~80°C 20 cycles without change      | Unchanged                           | Qualified                  |
| Boiling water resistance            | Unchanged                                | Unchanged                           | Qualified                  |
| Coefficient of heat expansion       | $\geq 4.00 \times 10^{-5}\text{°C}^{-1}$ | $2.93 \times 10^{-5}\text{°C}^{-1}$ | Qualified                  |
| Heat deformation temperature        | $\geq 105\text{°C}$                      | 112°C                               | Qualified                  |

The test result meets the index requirements of quality product of GB/T17748-1999