

# PROPERTIES HDPE

## Legend

► This table is a valuable help in the choice of a material. The data listed here fall with in the normal range of product properties of dry material. However, they are not guaranteed and they should not be used to establish material specification limits nor used alone as the basis of design

| PROPERTIES                    | ITEM                                   |  | Method    | Unit                | HDPE              |
|-------------------------------|--|--|-----------|---------------------|-------------------|
|                               |  |  | ISO/(IEC) |                     |                   |
|                               | Color                                  |  | -         | -                   | White/black       |
|                               | Density                                |  | 1183      | g/cm <sup>3</sup>   | 0.95              |
|                               | Water absorption                       | After 24/96h immersion in water of 23°C<br>At saturation air 23°C, 50%RH<br>At saturation in water of 23°C | 62        | mg                  | -                 |
|                               |  |  | 62        | %                   | 0.01/-            |
|                               |  |  | -         | %                   | -                 |
| -                             |  |  | %         | -                   |                   |
| Thermal Properties            | Melting Temperature                    |  | -         | °C                  | 134               |
|                               | Thermal conductivity at 23°C           |  | -         | W/(m·K)             | -                 |
|                               | Coefficient of inear Thermal expansion | Average value btw23~60°C   | -         | 10 <sup>-6</sup> /k | -                 |
|                               |  | Average value btw23~100°C  | -         | 10 <sup>-6</sup> /k | 150               |
|                               | Temperature of Deflection under load   | Method A : 1.8Mpa  | 75        | °C                  | 47                |
|                               | Max. allowable Service temp. in air    | For short periods  | -         | °C                  | -                 |
|                               |  | Continously : 5,000/20,000h  | -         | °C                  | -/-               |
|                               | Min.service temperature                |  | -         | °C                  | -75               |
| Flammability                  | UL94 (3/6mm thickness)                 | -  | -         | HB/HB               |                   |
| Mechanical Properties at 23°C | Tension test                           | Tensile stress   | 527       | MPa                 | 23                |
|                               |  | Tensile strainat break   | 527       | %                   | >100              |
|                               |  | Tensile modulus of elasticity  | 527       | MPa                 | 1000              |
|                               | Compression test                       | Compressive stress at 1/2/5/% nominal strain   | 604       | MPa                 | -/-/29            |
|                               | Izod impact strength-Notched           |  | 180/2A    | J/m                 | no break          |
|                               | Rockwell hardness                      |  | 2039-2    | -                   | R60               |
| Electrical Properties at 23°C | Electric strength                      |  | (60243)   | kV/mm               | -                 |
|                               | Volume resistivity                     |  | (60293)   | Ω·cm                | >10 <sup>14</sup> |
|                               | Surface resistivity                    |  | (60293)   | Ω                   | >10 <sup>13</sup> |
|                               | Relative permittivity:                 | 100Hz  | (60250)   | -                   | -                 |
|                               |  | 1MHz   | (60250)   | -                   | -                 |
|                               | Dielectric dissipation factor:         | 100Hz  | (60250)   | -                   | -                 |
|                               |  | 1MHz   | (60250)   | -                   | -                 |
|                               | Comparative tracking index(CTI)        |  | (60112)   | -                   | -                 |