



## TECHNICAL DATA SHEET

### H.D.P.E High Density Poly Ethylene)

Rod & Sheet Colour: White & Black  
 Used for Chopping Boards

#### GENERAL

|                                     |                         |           |           |
|-------------------------------------|-------------------------|-----------|-----------|
| Density                             | 0.955 g/cm <sup>3</sup> | ISO 1183  | DIN 53479 |
| Water absorption in air 50% r.h.    | 0 %                     | ISO 62    | DIN 53715 |
| Absorption 23-C in water-saturation | 0.02 %                  | ISO 62    | DIN 53495 |
| Food Compliance - NO                |                         | FDA / BfR |           |
| UV Stability - Yes                  |                         |           |           |

#### MECHANICAL PROPERTIES

|  |                        |           |           |
|--|------------------------|-----------|-----------|
| Tensile stress at yield at break                 | 30 N/mm <sup>2</sup>   | ISO 527   | DIN53455  |
| Elongation at break                              | 500 %                  | ISO 527   | DIN53455  |
| Tensile Modulus of elasticity                    | 800 N/mm <sup>2</sup>  | ISO 527   | DIN53455  |
| Compression test 1% strain 1000h                 | 3 N/mm <sup>2</sup>    | ISO 899   | DIN53444  |
| Impact strength Charpy 7,5 J                     | no break               | ISO R179  | DIN53453  |
| Notched impact strength Charpy                   | 12 KJ/ mm <sup>2</sup> | ISO179/3C | DIN53453  |
| Ball indentation hardness                        | 40 N/mm <sup>2</sup>   | ISO2039.1 | DIN53456  |
| Shore hardness (D)                               | D63                    | ISO2039.2 | DIN53456  |
| Coefficient of friction to steel <sup>[12]</sup> | 0.32                   | ISO 8295  | DIN 53375 |

#### THERMAL PROPERTIES

|  |  |             |           |
|--|--|-------------|-----------|
| Melting point  | 130 °C                                 | ISO 3146    |           |
| Thermal conductivity                                       | 0,39 W/(km)                            | ISO 22007.2 | DIN 52612 |
| Deformation at temperature HDT <sup>[15]</sup>             | 45 °C                                  | ISO75       | DIN 53461 |
| Linear expansion coefficient 23-60°C                       | 180 x 10 <sup>-6</sup> K <sup>-1</sup> | ISO 11359   | DIN 53752 |
| Operating temperature continuously <sup>[17]</sup>         | 80 °C                                  |             |           |
| Operating temperature short period-no load <sup>[18]</sup> | 90 °C                                  |             |           |
| Minimum operating temperature <sup>[19]</sup>              | -50 °C                                 |             |           |
| Flammability UL 94 (3-6 mm thickness)                      | HB                                     |             | UL94      |
| Oxygen index (LOI)   | 18 %                                   | ISO4589     | DIN 22117 |

#### ELECTRICAL PROPERTIES

|                                  |                      |         |           |
|----------------------------------|----------------------|---------|-----------|
| Dielectric constant at 1 MHz     | 2.3                  | ISO 250 | DIN 53483 |
| Dielectric strength              | 45 KV/mm             | ISO 243 | DIN 53481 |
| Volume resistivity               | 10 <sup>15</sup> Ωcm | ISO 93  | DIN 53482 |
| Dissipation factor tan Δ at 1MHz | 0.0006               | ISO 250 | DIN 53483 |

#### Characteristics:

- Extremely Light Weight & Tough
- Excellent Wear Resistance
- Good Chemical Resistance
- Low Co-efficient Of Friction

#### Applications:

- Chemical Vessels
- Storage Tanks
- Conveyor Components & Rollers
- Cutting Boards
- Bulk Solid Bins & Hoppers

Please Note: The above Technical Data Sheet is a general guide to the physical properties of the material. This information is given without Warranty or Liability. It is the customers responsibility to determine if this product is suitable for the application.