

# QUADRANT EPP PRODUCT DATA SHEET

## ERTALYTE®

(PET-P)

June 2001

ERTALYTE® offers a unique combination of physical properties compared to nylon or acetal. It has better wear and abrasion resistance, wet or dry, as well as significantly better dimensional stability. It is ideal for tight tolerance wear parts.

- Good resistance against acids (down to pH 1)
- Very good creep resistance
- Physiologically inert
- Good UV-resistance
- Continuous temperature 100°C (max. 160°C)
- Low dynamic coefficient of friction
- Very good dimensional stability
- Excellent wear resistance

Common applications: Bearings; Thrust washers; Slideways; Gears; Rollers; Pump components.

### Delivery Programme

Rod 1m long  
Diameter (mm): 10 (Min) 210 (Max)

Rod 3m long  
Diameter (mm): 10 (Min) 150 (Max)

Tube 1m & 3m long  
O.D. (mm): 20 (Min) 200 (Max)  
I.D. (mm): 12 (Min) 160 (Max)

Sheet 1m wide  
Length (mm): 1m & 2m  
Thickness (mm): 2 (Min) 6 (Max)

Plate 610mm wide  
Length (mm): 1m & 3m  
Thickness (mm): 8 (Min) 100 (Max)

### Distributor

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### Technical Specification

| Property                                    | ISO Methods | Units                              | ERTALYTE®         |
|---|-------------|------------------------------------|-------------------|
| Colour                                      | -           | -                                  | Natural           |
| Density                                     | 1183        | g/cm <sup>3</sup>                  | 1.39              |
| Water absorption                            |             |                                    |                   |
| Saturation in air (23°C / 50% RH)           | -           | %                                  | 0.25              |
| Saturation in water (23°C)                  | -           | %                                  | 0.50              |
| Tensile strength* <sup>1</sup>              | 527         | N/mm <sup>2</sup>                  | 90                |
| Tensile modulus of elasticity* <sup>1</sup> | 527         | N/mm <sup>2</sup>                  | 3700              |
| Elongation at break* <sup>1</sup>           | 527         | %                                  | 15                |
| Impact - Charpy* <sup>1</sup>               | 179/1eU     | kJ/m <sup>2</sup>                  | >50               |
| Impact - Izod notched* <sup>1</sup>         | 180/2A      | kJ/m <sup>2</sup>                  | 2                 |
| Hardness                                    | Rockwell    | -                                  | M96               |
|   | Shore D     | -                                  | -                 |
| Melt point                                  | -           | °C                                 | 255               |
| Max allowable service temp in air           |             |                                    |                   |
| for short periods                           | -           | °C                                 | 160               |
| continuously for 20,000hrs                  | -           | °C                                 | 100               |
| Linear thermal expansion coefficient        | -           | K <sup>-1</sup> x 10 <sup>-5</sup> | 6.0               |
| Thermal conductivity                        | -           | W/(K.m)                            | 0.29              |
| Flammability* <sup>2</sup> (6mm thickness)  | -           | -                                  | HB                |
| Volume resistivity* <sup>1</sup>            | IEC93       | Ohm.cm                             | >10 <sup>15</sup> |
| Dielectric strength* <sup>1</sup>           | IEC243      | kV/mm                              | 22                |
| Outside applications - UV resistance        | -           | -                                  | A                 |
| Acids - strong (pH < 3)                     | -           | -                                  | B                 |
| Alkalis - strong (pH > 11)                  | -           | -                                  | C                 |
| Chlorinated hydrocarbons                    | -           | -                                  | A/B               |
| Hot water                                   | -           | -                                  | B                 |

'A' - Acceptable service; 'B' - Limited service; 'C' - Unacceptable.

\*<sup>1</sup> Measured on dry test specimens (where applicable)

\*<sup>2</sup> Tests completed by Quadrant EPP, using UL test methods

Not all material sizes shown within the delivery programme section of this data sheet are available as standard. Please contact Quadrant EPP UK Ltd for further details.

The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.