

# KYNAR FLEX® 2850 WR

Kynar Flex® resins are fluorinated thermoplastic copolymers.

Kynar Flex® 2850 WR resin is a copolymer powder designed for rotomolding and rotolining with processing properties and high chemical resistance equivalent to Kynar Flex® 2850 resin.

## MAIN CHARACTERISTICS

| PROPERTIES                                        | VALUE         | UNIT                   | TEST STANDARD  |
|---------------------------------------------------|---------------|------------------------|----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                     |               |                        |                |
| Melt Volume-Flow Rate                             | 7.5           | cm <sup>3</sup> /10min | ISO 1133       |
| Temperature                                       | 230           | °C                     | -              |
| Load                                              | 3.8           | kg                     | -              |
| Melt Flow Rate                                    | 8 - 25        | g/10min                | ASTM D1238     |
| Temperature                                       | 230           | °C                     | -              |
| Load                                              | 3.8           | kg                     | -              |
| Melt Viscosity, 230°C, 100 s-1                    | 4 - 8         | kPoise                 | ASTM D3835     |
| <b>MECHANICAL PROPERTIES</b>                      |               |                        |                |
| Tensile Modulus, 73 °F                            | 1030 - 1520   | MPa                    | ASTM D638      |
| Yield stress                                      | 35            | MPa                    | ISO 527-1/-2   |
| Tensile Strength at Yield, 73 °F                  | 31 - 41.4     | MPa                    | ASTM D638      |
| Yield strain                                      | 10            | %                      | ISO 527-1/-2   |
| Elongation at Yield, 73 °F                        | 5 - 15        | %                      | ASTM D638      |
| Nominal Strain at Break                           | > 50          | %                      | ISO 527-1/-2   |
| Tensile Strength at Break, 73 °F                  | 27.6 - 48.3   | MPa                    | ASTM D638      |
| Elongation at Break, 73 °F                        | 30 - 200      | %                      | ASTM D638      |
| Taber Abrasion, CS 17 1000g:pad                   | 6 - 9         | mg/1000 cycles         | ASTM-G195-13A  |
| Hardness, Shore D, 73 °F                          | 70 - 75       | -                      | ASTM D2240     |
| Flexural Modulus, 73 °F                           | 1030 - 1240   | MPa                    | ASTM D790      |
| Flexural Strength @ 5% Strain, 73 °F              | 20.7 - 34.5   | MPa                    | ASTM D790      |
| Compressive Strength, 73 °F                       | 41.4 - 58.6   | MPa                    | ASTM D695      |
| Unnotched Impact Strength, 73 °F                  | No Break      | kJ/m                   | ASTM D256      |
| Notched Impact Strength, 73 °F                    | 0.16 - 0.427  | kJ/m                   | ASTM D256      |
| Coefficient of Friction, Static vs. Steel, 73 °F  | 0.25          | -                      | ASTM D1894     |
| Coefficient of Friction, Dynamic vs. Steel, 73 °F | 0.19          | -                      | ASTM D1894     |
| <b>THERMAL PROPERTIES</b>                         |               |                        |                |
| Melting Temperature, 10°C/min                     | 158           | °C                     | ISO 11357-1/-3 |
| Melting Point, 73 °F                              | 155 - 160     | °C                     | ASTM D3418     |
| Glass Transition Temperature (Tg)                 | -40.6 - -38.3 | °C                     | ASTM D7028     |
| Temperature Rating                                | 140           | °C                     | UL RTI         |
| Temp. of Deflection Under Load, 1.80 MPa          | 46            | °C                     | ISO 75-1/-2    |

Arkema France - A French "société anonyme", registered in the Nanterre (France) Trade and Companies Register under the number 319 632 790 SJC/11-2018

Please consult Arkema's disclaimer regarding the use of Arkema's products on <https://www.arkema.com/en/products/product-safety/disclaimer/index.html>

**KYNAR FLEX®**  
BY ARKEMA

# KYNAR FLEX® 2850 WR

|                                                 |              |          |                 |
|-------------------------------------------------|--------------|----------|-----------------|
| Heat Deflection Temperature, 264 Psi, 248 °F/hr | 37.8 - 55    | °C       | ASTM D648       |
| Heat Deflection Temperature, 66 Psi, 248 °F/hr  | 60 - 75      | °C       | ASTM D648       |
| Coefficient of Thermal Expansion, 73 °F         | 12.6 - 18.5  | 10E-5/°C | ASTM D696       |
| Burning Behav. at Thickness h                   | V-0          | class    | IEC 60695-11-10 |
| Thickness Tested                                | 0.8          | mm       | -               |
| Oxygen Index                                    | 43           | %        | ISO 4589-1/-2   |
| Limiting Oxygen Index, 73 °F                    | 43           | %        | ASTM D2863      |
| Thermal Conductivity                            | 0.144 - 0.18 | W/(m K)  | ASTM D433       |
| Specific Heat                                   | 745 - 958    | J/(kg K) | DSC             |
| Thermal Decomposition TGA, in air               | 375          | °C       | 1% wt. loss     |
| Thermal Decomposition TGA, in nitrogen          | 410          | °C       | 1% wt. loss     |
| <b>ELECTRICAL PROPERTIES</b>                    |              |          |                 |
| Dielectric Constant, 1 kHz                      | 3.5 - 10.2   | -        | ASTM D150       |
| Dissipation Factor, 100 kHz                     | 0.01 - 0.22  | -        | ASTM D150       |
| Volume Resistivity                              | 2E12         | Ohm*m    | IEC 60093       |
| Volume Resistivity, DC 68 °F, 65% R.H.          | 2E14         | Ohm*cm   | ASTM D257       |
| Dielectric (Electric) Strength, 73°F            | 1.3 - 1.6    | kV/mil   | ASTM D149       |
| <b>OTHER PROPERTIES</b>                         |              |          |                 |
| Specific Gravity, 73 °F                         | 1.77 - 1.8   | -        | ASTM D792       |
| <b>OPTICAL PROPERTIES</b>                       |              |          |                 |
| Refractive Index @ sodium D line                | 1.42         | -        | ASTM D542       |

## REGIONAL AVAILABILITY

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Please consult Arkema's disclaimer regarding the use of Arkema's products on <https://www.arkema.com/en/products/product-safety/disclaimer/index.html>

Kynar Flex® is a registered trademark of Arkema  
© 2022 Arkema Inc. All rights reserved.

[kynar.com](http://kynar.com)

**KYNAR FLEX®**  
BY **ARKEMA**

**Arkema Inc. – Technical Polymers**  
900 First Avenue  
King of Prussia, PA 19406  
Tel.: +1 610 205 7000  
Fax: +1 610 205 7497  
[arkema-america.com](http://arkema-america.com)

**Headquarters: Arkema France**  
420, rue d'Estienne d'Orves  
92705 Colombes Cedex – France  
Tel.: +33 1 49 00 80 80  
Fax: +33 1 49 00 83 96  
[arkema.com](http://arkema.com)

Arkema France - A French "société anonyme", registered in the Nanterre (France) Trade and Companies Register under the number 319 632 790 S00711-2018