



# OLIO SILICONICO BLUESIL™ FLD 604V50

|  |   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
|--|---|--------------|--------------|-------------------------------|----|---------------------------------------|------|----------------------------------|------|-----------------------------------|-----|--------------------------|-----|-----------------------------------|-------|---|----|--|-----------------------|--|-----------------------|---|------------|--|------------|----------------------------------|----------------------------|---------------------------------------|-----|---|----------------------------|
| <b>Description</b>   | <b>BLUESIL™ FLD 604V50</b> is a 100% dimethyl polysiloxane fluid, which has been processed and controlled to meet electrical specifications. <b>BLUESIL™ FLD 604V50</b> exhibits excellent dielectric, thermal and chemical properties which makes it an environmentally-safe replacement for PCB-containing fluids as the dielectric coolant for immersed transformers   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Applications</b>  | <b>BLUESIL™ FLD 604V50</b> is used principally as an insulating and cooling agent in immersed transformers. It may be also used in most medium-to-high tension applications (such as in switchboxes, induction coils, capacitors, resistors, etc.), where environmental and fire safety precautions must be considered (i.e. public buildings, built-up areas, underground, or near water).   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Features</b>  | <ul style="list-style-type: none"> <li>• Excellent dielectric properties</li> <li>• Excellent thermal stability</li> <li>• Inertness and chemical resistance</li> <li>• Good heat transfer properties</li> <li>• Flame resistant</li> <li>• Non-toxic to humans and the environment</li> </ul>  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Typical Properties</b>                                    | <p><b>Typical Properties – as supplied</b></p> <table border="1"> <tr> <td>• Appearance</td> <td>clear liquid</td> </tr> <tr> <td>• Viscosity, 25°C, (77°F) cps</td> <td>50</td> </tr> <tr> <td>• Viscosity- Temperature Coefficient*</td> <td>0.59</td> </tr> <tr> <td>• Specific Gravity, 25°C, (77°F)</td> <td>0.96</td> </tr> <tr> <td>• Flash Point, (open cup) °C.(°F)</td> <td>300</td> </tr> <tr> <td>• Freeze Point, °C, (°F)</td> <td>-50</td> </tr> <tr> <td>• Refractive index @ 25°C, (77°F)</td> <td>1.402</td> </tr> <tr> <td>• Surface tension @ 25°C (77°F), dynes/cm</td> <td>21</td> </tr> <tr> <td>• Vapor Pressure @ 200°C, (392°F), mm Hg</td> <td><math>1.33 \times 10^{-3}</math></td> </tr> <tr> <td>• Coefficient of Expansion, between 25 and 100°C</td> <td><math>1.05 \times 10^{-3}</math></td> </tr> <tr> <td>• Dielectric Strength, ASTM D877; 25°C, kV/mm</td> <td>40 minimum</td> </tr> <tr> <td>• Dielectric Strength, AFNOR NFC 27221 &amp; CEI156; 25°C, kV/mm</td> <td>50 minimum</td> </tr> <tr> <td>• Volume Resistivity, 25°C; Ω cm</td> <td><math>1 \times 10^{15}</math> minimum</td> </tr> <tr> <td>• Dielectric Constant, 25°C; 50/60 HZ</td> <td>2.7</td> </tr> <tr> <td>• Dielectric Dissipation Factor, 25°C; 50/60 HZ</td> <td><math>3 \times 10^{-5}</math> minimum</td> </tr> </table> <p>* Viscosity-Temperature Coefficient = <math>1 - (\text{viscosity @ } 99^\circ\text{C} / \text{viscosity @ } 38^\circ\text{C})</math></p> <p><small>Please note: The typical properties listed in this bulletin are not intended for use in preparing specifications for any particular application of BLUESIL™ silicone materials. Please contact our Technical Service Department for assistance in writing specifications.</small></p> | • Appearance | clear liquid | • Viscosity, 25°C, (77°F) cps | 50 | • Viscosity- Temperature Coefficient* | 0.59 | • Specific Gravity, 25°C, (77°F) | 0.96 | • Flash Point, (open cup) °C.(°F) | 300 | • Freeze Point, °C, (°F) | -50 | • Refractive index @ 25°C, (77°F) | 1.402 | • Surface tension @ 25°C (77°F), dynes/cm | 21 | • Vapor Pressure @ 200°C, (392°F), mm Hg | $1.33 \times 10^{-3}$ | • Coefficient of Expansion, between 25 and 100°C | $1.05 \times 10^{-3}$ | • Dielectric Strength, ASTM D877; 25°C, kV/mm | 40 minimum | • Dielectric Strength, AFNOR NFC 27221 & CEI156; 25°C, kV/mm | 50 minimum | • Volume Resistivity, 25°C; Ω cm | $1 \times 10^{15}$ minimum | • Dielectric Constant, 25°C; 50/60 HZ | 2.7 | • Dielectric Dissipation Factor, 25°C; 50/60 HZ | $3 \times 10^{-5}$ minimum |
| • Appearance   | clear liquid  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Viscosity, 25°C, (77°F) cps                                | 50  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Viscosity- Temperature Coefficient*                        | 0.59  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Specific Gravity, 25°C, (77°F)                             | 0.96  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Flash Point, (open cup) °C.(°F)                            | 300   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Freeze Point, °C, (°F)                                     | -50   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Refractive index @ 25°C, (77°F)                            | 1.402   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Surface tension @ 25°C (77°F), dynes/cm                    | 21  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Vapor Pressure @ 200°C, (392°F), mm Hg                     | $1.33 \times 10^{-3}$   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Coefficient of Expansion, between 25 and 100°C             | $1.05 \times 10^{-3}$   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Dielectric Strength, ASTM D877; 25°C, kV/mm                | 40 minimum  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Dielectric Strength, AFNOR NFC 27221 & CEI156; 25°C, kV/mm | 50 minimum  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Volume Resistivity, 25°C; Ω cm                             | $1 \times 10^{15}$ minimum  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Dielectric Constant, 25°C; 50/60 HZ                        | 2.7   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| • Dielectric Dissipation Factor, 25°C; 50/60 HZ              | $3 \times 10^{-5}$ minimum  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Storage and shelf life</b>                                | <b>BLUESIL™ FLD 604V50</b> when stored in the original, unopened container at room temperatures (5-25°C/41-77°F), has a shelf life of 36 months from the date of manufacture. Beyond this date, Bluestar Silicones no longer guarantees that the product meets the sales specifications.  |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Safety</b>  | Please read the container labels for <b>BLUESIL™ FLD 604V50</b> or consult the Material Safety Data Sheet (MSDS) before handling for safe use, physical and health hazard information. The MSDS is not included with the product packaging, but can be obtained by contacting Bluestar Silicones at 866-474-6342 or consult your Bluestar Silicones representative.   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |
| <b>Packaging</b>   | <b>BLUESIL™ FLD 604V50</b> is available in 200 kg containers. Certificate of Analysis for each lot purchased is available on request.   |              |              |                               |    |                                       |      |                                  |      |                                   |     |                          |     |                                   |       |   |    |  |                       |  |                       |   |            |  |            |                                  |                            |                                       |     |   |                            |

BLUESIL™ is a trademark of Bluestar Silicones

**BLUESIL™ FLD 604V50**

distribuito da:  
**ANDREA GALLO DI LUIGI S.r.l.**  
 azienda fondata nel 1892  
 Via Erzelli, 9 - 16152 Genova (Italy)  
 Tel. 010.650.29.41  
[www.andreagallo.it](http://www.andreagallo.it)

|  EUROPE   |  NORTH AMERICA   |  LATIN AMERICA  |  ASIA PACIFIC  |
|--|---|--|---|
| <p><i>Bluestar Silicones France</i><br/>           21 Avenue Georges Pompidou<br/>           F69486 Lyon Cedex 03<br/>           FRANCE<br/>           Tel. (33) 4 72 13 19 00<br/>           Fax (33) 4 72 13 19 88</p> | <p><i>Bluestar Silicones USA</i><br/>           Two Tower Center Boulevard<br/>           Suite 1601<br/>           East Brunswick, NJ 08816-1100<br/>           United States<br/>           Tel. (1) 732 227 2060<br/>           Fax (1) 732 249 7000</p> | <p><i>Bluestar Silicones Brazil Ltda.</i><br/>           Av. Maria Coelho Aguiar, 215<br/>           Bloco G - 1º Andar<br/>           05804-902 - São Paulo - SP -<br/>           Brazil<br/>           Tel. (55) 11 3747 7887<br/>           Fax (55) 11 3741 7718</p> | <p><i>Bluestar Silicones Hong Kong<br/>           Trading Co. Ltd.</i><br/>           29<sup>th</sup> Floor, 88 Hing Fat Street<br/>           Causeway Bay<br/>           Hong Kong<br/>           Tel. (852) 3106 8200<br/>           Fax (852) 2979 0241</p> |

**Warning to users**

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