

# Polidiemme® G/450

Thermoset Elastomer

Solvay Specialty Polymers

## Message:

Polidiemme®XLPO-crosslinkable polyolefin elastomer compound c can be coached by ambient humidity and contains silane pre-grafted matrix compound used with catalyst masterbatch (SIOPLAS®method). Meet the following standards:-Cenelec HD 22.1 EI3, EI4,EI6,EI7, EM3, EM4;IEC 60502 EPR; IEC 60092/351 EPR; BS 7655 RS5, GP7;EN 50363-0 G8;VDE 0207/20 3GI3

| General Information                                    |                             |                    |                 |
|--------------------------------------------------------|-----------------------------|--------------------|-----------------|
| Features                                               | Low toxicity                |                    |                 |
|                                                        | Crosslinkable               |                    |                 |
|                                                        | Good flexibility            |                    |                 |
| Uses                                                   | Low voltage insulation      |                    |                 |
|                                                        | Cable sheath                |                    |                 |
|                                                        | Wire and cable applications |                    |                 |
| RoHS Compliance                                        | RoHS compliance             |                    |                 |
| Physical                                               | Nominal Value               | Unit               | Test Method     |
| Specific Gravity <sup>1</sup>                          | 0.870                       | g/cm <sup>3</sup>  | ASTM D792       |
| Melt Mass-Flow Rate (MFR) <sup>2</sup> (190°C/2.16 kg) | 1.1                         | g/10 min           | Internal method |
| Water Absorption                                       |                             |                    | IEC 60811       |
| 24 hours: 100°C                                        | 0.420                       | mg/cm <sup>2</sup> | IEC 60811       |
| 336 hours: 85°C                                        | 0.660                       | mg/cm <sup>2</sup> | IEC 60811       |
| Thermoset <sup>3</sup>                                 |                             |                    | IEC 60811       |
| 200°C, maximum permanent elongation after cooling      | 0.0                         | %                  | IEC 60811       |
| Load elongation at break at 200 °C                     | 40                          | %                  | IEC 60811       |
| 250°C, maximum permanent elongation after cooling      | 0.0                         | %                  | IEC 60811       |
| 250°C, load elongation at break                        | 50                          | %                  | IEC 60811       |
| Hot pressing test-Maximum deformation, K = 1(150°C)    |                             | %                  | IEC 60811       |
| Bending test (-50°C)                                   | No cracking                 |                    | IEC 60811       |
| Insulation resistance constant                         |                             |                    | IEC 60502       |
| 20°C                                                   | 15000                       | Mohms · km         | IEC 60502       |
| 90°C                                                   | 500                         | Mohms · km         | IEC 60502       |
| Ring temperature                                       | 140 - 170                   | °C                 |                 |
| Head Temperature                                       | 140 - 170                   | °C                 |                 |
| Hardness                                               | Nominal Value               | Unit               | Test Method     |
| Durometer Hardness (Shore D)                           | 16                          |                    | ISO 868         |

| Mechanical                                                                                                                                                                                                                                                                                                                        | Nominal Value | Unit    | Test Method |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|-------------|
| Tensile Strength (Break)                                                                                                                                                                                                                                                                                                          | 7.70          | MPa     | IEC 60811   |
| Tensile Elongation (Break)                                                                                                                                                                                                                                                                                                        | 400           | %       | IEC 60811   |
| Aging                                                                                                                                                                                                                                                                                                                             | Nominal Value | Unit    | Test Method |
| 0.5MPa, change of mechanical properties after air bomb aging test, 127°C, 40 hr                                                                                                                                                                                                                                                   |               |         | IEC 60811   |
| Tensile strength change                                                                                                                                                                                                                                                                                                           | 12            | %       | IEC 60811   |
| Change in tensile elongation                                                                                                                                                                                                                                                                                                      | -8            | %       | IEC 60811   |
| Changes in mechanical properties after hot air aging test, 100°C, 336 hr                                                                                                                                                                                                                                                          |               |         | IEC 60811   |
| Tensile strength change                                                                                                                                                                                                                                                                                                           | 10            | %       | IEC 60811   |
| Change in tensile elongation                                                                                                                                                                                                                                                                                                      | -16           | %       | IEC 60811   |
| Changes in mechanical properties after hot air aging test, 135°C, 168 hr                                                                                                                                                                                                                                                          |               |         | IEC 60811   |
| Tensile strength change                                                                                                                                                                                                                                                                                                           | 20            | %       | IEC 60811   |
| Change in tensile elongation                                                                                                                                                                                                                                                                                                      | 12            | %       | IEC 60811   |
| Electrical                                                                                                                                                                                                                                                                                                                        | Nominal Value | Unit    | Test Method |
| Volume Resistivity                                                                                                                                                                                                                                                                                                                |               |         | IEC 60502   |
| 20°C                                                                                                                                                                                                                                                                                                                              | 4.1E+15       | ohms·cm | IEC 60502   |
| 90°C                                                                                                                                                                                                                                                                                                                              | 1.4E+14       | ohms·cm | IEC 60502   |
| Dielectric Strength                                                                                                                                                                                                                                                                                                               | 28            | kV/mm   | ASTM D149   |
| Dielectric Constant (1 kHz)                                                                                                                                                                                                                                                                                                       | 2.30          |         | ASTM D150   |
| Dissipation Factor (1 kHz)                                                                                                                                                                                                                                                                                                        | 1.1E-3        |         | ASTM D150   |
| Additional Information                                                                                                                                                                                                                                                                                                            |               |         |             |
| <p>测试报告采用挤压或挤出样本获得,添加了 5% 的Catalyst CT/1,在95°C热水中交联2小时.着色-PE类母粒按重量添加0.6-1 %;如果存储过程中吸收了水份,建议预烘干色母粒( 70-80°C下4-6小时).存储</p> <p>产品必须按下列条件存储:</p> <p>--密封,包装袋完好</p> <p>环境温度不超过30°C</p> <p>--避免在阳光下曝晒,或露天放置</p> <p>存放时间过长会造成产品性状改变.</p> <p>保质期: 9个月</p> <p>如果没有满足上述条件,苏威特种聚合物不承担任何责任.</p> <p>包装:</p> <p>采用防潮袋包装. 每袋15kg,每只货板堆放825g.</p> |               |         |             |
| Extrusion                                                                                                                                                                                                                                                                                                                         | Nominal Value | Unit    |             |
| Cylinder Zone 1 Temp.                                                                                                                                                                                                                                                                                                             | 120 - 140     | °C      |             |
| Cylinder Zone 2 Temp.                                                                                                                                                                                                                                                                                                             | 120 - 150     | °C      |             |
| Cylinder Zone 3 Temp.                                                                                                                                                                                                                                                                                                             | 130 - 160     | °C      |             |
| Cylinder Zone 4 Temp.                                                                                                                                                                                                                                                                                                             | 140 - 170     | °C      |             |
| Die Temperature                                                                                                                                                                                                                                                                                                                   | 140 - 170     | °C      |             |
| Extrusion instructions                                                                                                                                                                                                                                                                                                            |               |         |             |

加工: - - POLIDIEMME® G450 预接枝基体树脂必须加用 CT/1母粒促进固化.催化剂用量为混合物重量的5%,应在挤塑加工前不超过2-3小时之内进行配混.最好用挤出机料斗混合.如果催化剂用原始包装密封存储于干燥环境不需要任何预干燥.如需预干燥,可以在50-60℃温度下干燥4-8小时.

-预接枝基体树脂混和物容易受潮,开袋后需在4小时内使用.预接枝基体树脂不可以预先干燥. 挤塑设备: 一标准PVC挤出机和单/双螺纹螺杆,L/D比为20:30,恰当调节机筒温度,螺杆较长,需减少催化剂用量.

无需冷却螺杆

-过滤网: 80-160目/ cm<sup>2</sup>

建议采用压缩装置 固化: -浸入60-70℃温水中-暴露于环境中 -暴露于环境中,交联时间取决于环境温度和相对湿度

-不管在什么情况下,固化时间都取决于保温厚度,如在温水中强行固化,壁厚 0.7-1.2 mm ,一般需要 2~4 小时

| NOTE |                                                   |
|------|---------------------------------------------------|
| 1.   | 23℃                                               |
| 2.   | The test was performed without adding catalyst MB |
| 3.   | 20 N/cm <sup>2</sup>                              |

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