

# Polidan® EC/110

Crosslinked Polyethylene

Solvay Specialty Polymers

## Message:

Polidan® XLPE-PEX-crosslinkable polyethylene

Low-density polyethylene compounds are moisture-crosslinkable and contain silane pre-grafted matrix compounds used with catalyst masterbatch (SIOPLAS® method).

standards met:-IEC 60502 XLPE, IEC 60092/351, CEI 18-16/351, BS 7655 GP8, VDE 0276 2XI1, HD 604 2XI1, HD 626 S1 TIX2

| General Information                                           |                             |                    |                 |
|---------------------------------------------------------------|-----------------------------|--------------------|-----------------|
| Features                                                      | Low density                 |                    |                 |
|                                                               | Low toxicity                |                    |                 |
|                                                               | Crosslinkable               |                    |                 |
| Uses                                                          | Low voltage insulation      |                    |                 |
|                                                               | Wire and cable applications |                    |                 |
| RoHS Compliance                                               | RoHS compliance             |                    |                 |
| Physical                                                      | Nominal Value               | Unit               | Test Method     |
| Specific Gravity <sup>1</sup>                                 | 0.918                       | g/cm <sup>3</sup>  | ASTM D792       |
| Melt Mass-Flow Rate (MFR) <sup>2</sup> (190°C/2.16 kg)        | 0.70                        | g/10 min           | Internal method |
| Water Absorption                                              |                             |                    | IEC 60811       |
| 24 hours: 100°C                                               |                             | mg/cm <sup>2</sup> | IEC 60811       |
| 336 hours: 85°C                                               |                             | mg/cm <sup>2</sup> | IEC 60811       |
| Bending test change-In the air, 240 hours(150°C) <sup>3</sup> | No cracking                 |                    | IEC 60811       |
| Thermoset <sup>4</sup>                                        |                             |                    | IEC 60811       |
| 200°C, maximum permanent elongation after cooling             | 0.0                         | %                  | IEC 60811       |
| Load elongation at break at 200 °C                            |                             | %                  | IEC 60811       |
| Hot air contraction-1 hour(130°C)                             |                             | %                  | IEC 60811       |
| Insulation resistance constant                                |                             |                    | IEC 60502       |
| 20°C                                                          | 15000                       | Mohms · km         | IEC 60502       |
| 90°C                                                          | 10000                       | Mohms · km         | IEC 60502       |
| Ring temperature                                              | 170 - 190                   | °C                 |                 |
| Head Temperature                                              | 170 - 190                   | °C                 |                 |
| Hardness                                                      | Nominal Value               | Unit               | Test Method     |
| Durometer Hardness (Shore D)                                  | 51                          |                    | ISO 868         |
| Mechanical                                                    | Nominal Value               | Unit               | Test Method     |
| Tensile Strength (Break)                                      | 21.6                        | MPa                | IEC 60811       |
| Tensile Elongation (Break)                                    | 500                         | %                  | IEC 60811       |

| Aging                                                                    | Nominal Value | Unit    | Test Method |
|--------------------------------------------------------------------------|---------------|---------|-------------|
| Changes in mechanical properties after hot air aging test, 135°C, 168 hr |               |         | IEC 60811   |
| Tensile strength change                                                  | 15            | %       | IEC 60811   |
| Change in tensile elongation                                             | -8            | %       | IEC 60811   |
| Electrical                                                               | Nominal Value | Unit    | Test Method |
| Volume Resistivity                                                       |               |         | IEC 60502   |
| 20°C                                                                     | 4.1E+15       | ohms·cm | IEC 60502   |
| 90°C                                                                     | 2.7E+15       | ohms·cm | IEC 60502   |
| Dielectric Strength                                                      | 34            | kV/mm   | ASTM D149   |
| Dielectric Constant (1 kHz)                                              | 2.30          |         | ASTM D150   |
| Dissipation Factor (1 kHz)                                               | 6.0E-4        |         | ASTM D150   |
| Additional Information                                                   |               |         |             |

测试报告采用挤压或挤出样本获得,添加了 3% 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 0.5-1 %,如果在存储期间吸收了水份,建议预烘干色母粒( 70-80°C下4-6小时).

存储  
 产品必须按下列条件存储:  
 --密封,包装袋完好  
 环境温度不超过30°C  
 --避免在阳光下曝晒,或露天放置  
 存放时间过长会造成产品性状改变.  
 保质期: 9个月  
 如果没有满足上述条件,苏威特种聚合物不承担任何责任.

包装:  
 采用防潮袋包装. 每袋25 kg,每只货板堆放1375kg.  
 每只纸箱500 kg

| Extrusion             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 140 - 160     | °C   |
| Cylinder Zone 2 Temp. | 150 - 170     | °C   |
| Cylinder Zone 3 Temp. | 160 - 180     | °C   |
| Cylinder Zone 4 Temp. | 160 - 180     | °C   |
| Die Temperature       | 180 - 220     | °C   |

| Extrusion instructions                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 加工: POLIDAN ® EC/110 预接枝基体树脂必须加用催化剂CT/1母粒促进固化.催化剂用量为混合物重量的3%,应在挤塑加工前,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°C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.预接枝基础料不可以预先干燥. 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°C温水中-暴露于环境中 -暴露在环境中,交联时间取决于环境温度和相对湿度                                                                                           |
| -不管在什么情况下,固化时间均取决于保温厚度,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°C                                              |
| 2.   | The test was performed without adding catalyst MB |
| 3.   | Untinned copper                                   |
| 4.   | 20 N/cm <sup>2</sup>                              |

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