# EL-Lene™ H5211PC

High Density Polyethylene

SCG Chemicals Co., Ltd.

## Message:

EL-Lene H5211PC is a black, bimodal technology, high density polyethylene compound classified as a MRS 8.0 material (PE80) providing superior in mechanical properties and processablity. EL-Lene H5211PC also shows excellent resistance to rapid crack propagation and slow crack growth. In addition, It includes a good dispersion of carbon black pigment and anti-oxidant to ensure excellent long term in UV resistance and thermal stability.

| General Information | |
|---|---|
| Additive | Carbon black (2%) |
| Features | Antioxidation<br>Good UV resistance<br>Workability, good<br>Good cracking resistance<br>Thermal stability, good |
| Uses | Bellows<br>Piping system<br>Agricultural application |
| Agency Ratings | PPI PE-3408<br>PPI PE-80 |
| Appearance | Black |
| Forms | Particle |
| Processing Method | Pipeline extrusion molding<br>Extrusion |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 0.960 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (190°C/5.0 kg) | 0.40 | g/10 min | ISO 1133 |
| Environmental Stress-Cracking Resistance (F0) | > 10000 | hr | ASTM D1693 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore D) | 62 | | ASTM D2240 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress | | | ISO 527-2/100 |
| Yield | 22.0 | MPa | ISO 527-2/100 |
| Fracture | 33.0 | MPa | ISO 527-2/100 |
| Tensile Strain (Break) | 810 | % | ISO 527-2/100 |
| Flexural Modulus | 980 | MPa | ASTM D790 |

| Impact | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Notched Izod Impact | | | ASTM D256 |
| -20°C | 8.0 | J/m | ASTM D256 |
| 0°C | 160 | J/m | ASTM D256 |
| 23°C | 200 | J/m | ASTM D256 |

| Additional Information |
|---|
| Oxidation induction time, ISO/TR10837, 20°C: >50 minMRS, ISO TR9080: 8 MPaResistance to slow crack grwoth, ISO 13479, 80°C: >500 hrsRapid crack propagation, ISO 13477: >8 barResistance to gas constituents, ISO 1167: >20 hrsCarbon Black Content, ISO 6964: 2.3% wt |

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 80.0 - 90.0 | °C |
| Drying Time | 1.0 - 2.0 | hr |
| Melt Temperature | 170 - 200 | °C |

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## Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China