# ELITE™ 5811

### Enhanced Polyethylene Resin

### The Dow Chemical Company

#### Message:

ELITE 5811 is an extrusion coating resin. Main Characteristics: Suitable for processing on conventional hardware Extrusion coating resin Low neck-in Good heat resistance Enhanced water vapor barrier Extra toughness High performance sealant Complies with: EU, No 10/2011 U.S. FDA 21 CFR 177.1520 Consult the regulations for complete details.

| General Information |                     |
|---------------------|---------------------|
| Agency Ratings      | EU No 10/2011       |
|                     | FDA 21 CFR 177.1520 |

| Forms                                    | Pellets       |            |                 |
|--|---------------|------------|-----------------|
| Physical                                 | Nominal Value | Unit       | Test Method     |
| Specific Gravity                         | 0.919         | g/cm³      | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (190°C/2.16    |               |            |                 |
| kg)                                      | 8.0           | g/10 min   | ASTM D1238      |
| Mechanical                               | Nominal Value | Unit       | Test Method     |
| Tensile Stress (Break)                   | 21.2          | MPa        | ISO 527-2       |
| Tensile Strain (Break)                   | 720           | %          | ISO 527-2       |
| Flexural Modulus                         | 307           | MPa        | ISO 178         |
| Films                                    | Nominal Value | Unit       | Test Method     |
| Tensile Stress <sup>1</sup>              |               |            | ISO 527-3       |
| MD : Yield                               | 19.3          | MPa        |                 |
| TD : Yield                               | 16.2          | MPa        |                 |
| Tensile Elongation <sup>2</sup>          |               |            | ISO 527-3       |
| MD : Break                               | 540           | %          |                 |
| TD : Break                               | 610           | %          |                 |
| Elmendorf Tear Strength <sup>3</sup>     |               |            | ISO 6383-2      |
| MD                                       | 2.4           | Ν          |                 |
| TD                                       | 3.8           | Ν          |                 |
| Seal Initiation Temperature <sup>4</sup> | 98.0          | °C         | Internal Method |
| Water Vapor Transmission <sup>5</sup>    | 18            | g/m²/24 hr | ASTM E96        |
| Thermal                                  | Nominal Value | Unit       | Test Method     |

| Vicat Softening Temperature                        | 102   | °C    | ASTM D1525      |
|--|---|-------|-----------------|
| Melting Temperature (DSC)                          | 124   | °C    | Internal Method |
| Extrusion  | Nominal Value   | Unit  | Test Method     |
| Melt Temperature                                   | 260 to 320  | °C    |                 |
| Draw Down - From 15g/m² at 100 m/min <sup>6</sup>  | 250   | m/min | Internal Method |
| Minimum Coating Weight - Calculated <sup>7</sup>   | 6.0   | g/m²  | Internal Method |
| Neck-in - 25g/m² at 100 m/min <sup>8</sup> (290°C) | 84.0  | mm    | Internal Method |
| NOTE   |   |       |                 |
| 1.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
| 2.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
| 3.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
|  | - 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set Temperatures at which 3<br>N/15mm heat seal strength is<br>achieved Heat Seal Strengths |       |                 |
| 4.   | measured at 0.5sec sealing time,<br>0.5N/mm <sup>2</sup> pressure, 5mm seal bar,<br>cross head speed (150 mm/sec)<br>Kraft paper substrate  |       |                 |
| 5.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
| 6.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
| 7.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |
| 8.   | 25g/m <sup>2</sup> coating onto paper<br>substrate and/or coating web at<br>250 mm air gap and -15 nip<br>off-set.  |       |                 |

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## 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

