Technical Data Sheet LLDPE LL0209AA Linear Low Density Polyethylene

1) Product Description:

"LL 0209AA" is a LLDPE copolymer with butene-1 as co-monomer which contains antioxidant. It is recommended for general purpose applications. It is suitable for blending with conventional LDPE. Film made from pure LL 02090 AA has the following advantages over conventional LDPE:

Better sealing, higher puncture resistance Greater drawdown capability Higher tensile strength

Neutralizer: Calcium Stearate; Antioxidant: Irganox 1010, Irgafos 168

2) Applications:

- Food Grade

- Heave duty sacks, agricultural films, liners

- Produce bags, stretch film

3) Typical Data

| Property | Unit | Typical Value | Test Method |
|---------------------------------|-------------------|---------------|-------------|
| Melt Flow Rate (190 °C/2.16Kg) | g/10min | 0.9 | ISO 1133 |
| Density | g/cm ³ | 0.920 | ISO 1183 |
| Dart Drop Impact | gr | 150 | ASTM D 1709 |
| Tear Strength MD/TD | g/25µ | 145/370 | ASTM D1922 |
| Tensile Strength at Yield MD/TD | MPa | 10/11 | ISO 527 |
| Tensile Strength at Break MD/TD | MPa | 41/32 | ISO 527 |
| Elongation at Break MD/TD | % | 620/840 | ISO 527 |
| Haze (38µm Blown Film) | % | 12 | ASTM D1003 |
| Gloss (45°, 38µm Blown Film) | | 50 | ASTM D2457 |

Typical Properties: These are not to be construed as specifications

38 μ m film, 2:1 blow-up ratio, 225°C melt temperature MD = machine direction TD = transverse direction

4) Extrusion conditions

LL0209AA in lean blends can be processed on most standard extrusion equipment. Optimization of conditions may be necessary, depending on the exact blend used. An LL0209AA rich film formulation is often processed on modified LDPE machinery, but for the best performance the use of purposely designed LLDPE machinery is recommended. Particular attention should be paid to maintaining a low melt temperature (< 240°C), and an efficient bubble cooling system should be employed. The recommended melt temperature range is 180 - 225°C.

5) Food Regulations:

Conformity with the Requirements of EU Regulation Conformity with the Requirements of USA FDA Code of Federal Regulation (CFR21) (Pira International Company)

6) Storage

LL0209AA should be stored in a dry and dust free environment at temperatures below 50°C. Exposure to direct sunlight should be avoided, as this may lead to product deterioration.

7) Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, send an email to psnohreg@ineos.com. Unless specifically indicated, the products mentioned herein are not suitable for applications in the medical or pharmaceutical sector.

8) Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Material Safety Data Sheet (MSDS) that may be obtained from the website www.ineospolyolefins.com. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

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