

# HANWHA

## Linear Low Density Polyethylene

# 3120

Blown Film Grade

**MELT INDEX**      **1.0**  
**DENSITY**            **0.920**

HANWHA LLDPE 3120 is manufactured by Unipol process and designed for general purpose and agricultural film . LLDPE 3120 has well balanced property of mechanical property, processability and optical property

This product complies with U.S. FDA regulation 21 CFR 177.1520 (c) 3.1.a.

▣ **Outstanding Properties**

Mechanical Property  
 Optical Property  
 Processability

▣ **Processing Conditions**

Melt Temperature : 150 ~ 190 °C  
 Blow-up Ratio : 2 ~ 3  
 Optimum Gage Range : 0.03 ~ 0.1 mm

▣ **Additives**

Antioxidant, Slip agent, Anti-block agent

▣ **Physical Properties**

| Physical Properties                     | Unit               | Test Method | Value |     |
|---|--------------------|-------------|-------|-----|
| Melt Index                              | g/10min            | ASTM D1238  | 1.0   |     |
| Density                                 | g/cc               | ASTM D1505  | 0.920 |     |
| Vicat Softening Point                   | °C                 | ASTM D1525  | 103   |     |
| Melting Point                           | °C                 | HCC Method  | 122   |     |
| Tensile Strength at Break               | kg/cm <sup>2</sup> | ASTM D638   | 220   |     |
| Elongation at Break                     | %                  | ASTM D638   | 900   |     |
| Brittleness Temperature, F <sub>0</sub> | °C                 | ASTM D746   | < -76 |     |
| Film Properties                         | Unit               | Test Method | Value |     |
| Film Thickness                          | mm                 | HCC Method  | 0.03  |     |
| Tensile Strength at Break               | kg/cm <sup>2</sup> | ASTM D882   | MD    | 420 |
|   |                    |             | TD    | 380 |
| Elongation at Break                     | %                  | ASTM D882   | MD    | 650 |
|   |                    |             | TD    | 750 |
| Tensile Tear Strength                   | Kg/cm              | ASTM D1004  | MD    | 120 |
|   |                    |             | TD    | 125 |
| Dart Impact Strength                    | g                  | ASTM D1709  | 140   |     |
| Haze                                    | %                  | ASTM D1003  | 10.0  |     |

1. These are typical properties : not to be construed as specification.
2. The value for this property is dependent on part geometry and fabrication conditions.

