

# TOTAL Polyethylene MDPE HT 514

Medium Density Polyethylene

TOTAL Refining & Chemicals

## Message:

MDPE HT 514 is a medium density polyethylene produced by slurry loop process with hexene as co-monomer.  
MDPE HT 514 is a semi-high molecular weight polyethylene giving excellent mechanical properties. It shows a broad molecular weight distribution ensuring outstanding processability.  
MDPE HT 514 can be used alone, blended or coextruded in a wide variety of blown film applications : consumer, industrial, food or hygiene packaging.

| General Information |                                           |
|---------------------|-------------------------------------------|
| Additive            | Antioxidation                             |
| Features            | High molecular weight                     |
|                     | hexene comonomer                          |
|                     | Antioxidation                             |
|                     | Workability, good                         |
|                     | Medium wide molecular weight distribution |
| Uses                | Packaging                                 |
|                     | Films                                     |
|                     | Industrial application                    |
|                     | Food packaging                            |
|                     | Consumer goods application field          |
| Agency Ratings      | EC 1907/2006 (REACH)                      |
| Forms               | Particle                                  |
| Processing Method   | Blow film                                 |
|                     | Extrusion                                 |

| Physical                     | Nominal Value | Unit              | Test Method |
|------------------------------|---------------|-------------------|-------------|
| Density                      | 0.938         | g/cm <sup>3</sup> | ISO 1183    |
| Melt Mass-Flow Rate (MFR)    |               |                   | ISO 1133    |
| 190°C/2.16 kg                | 0.15          | g/10 min          | ISO 1133    |
| 190°C/21.6 kg                | 14            | g/10 min          | ISO 1133    |
| Mechanical                   | Nominal Value | Unit              | Test Method |
| Flexural Modulus             | 740           | MPa               | ISO 178     |
| Films                        | Nominal Value | Unit              | Test Method |
| Tensile Stress               |               |                   | ISO 527-3   |
| MD: Yield, 20 µm, blown film | 21.0          | MPa               | ISO 527-3   |
| TD: Yield, 20 µm, blown film | 22.0          | MPa               | ISO 527-3   |
| MD: Yield, 40 µm, blown film | 20.0          | MPa               | ISO 527-3   |
| TD: Yield, 40 µm, blown film | 20.0          | MPa               | ISO 527-3   |

| MD: Broken, 20 µm, blown film | 69.0          | MPa  | ISO 527-3   |
|-------------------------------|---------------|------|-------------|
| TD: Broken, 20 µm, blown film | 51.0          | MPa  | ISO 527-3   |
| MD: Broken, 40 µm, blown film | 56.0          | MPa  | ISO 527-3   |
| TD: Broken, 40 µm, blown film | 52.0          | MPa  | ISO 527-3   |
| Tensile Elongation            |               |      | ISO 527-3   |
| MD: Broken, 20 µm, blown film | 420           | %    | ISO 527-3   |
| TD: Broken, 20 µm, blown film | 520           | %    | ISO 527-3   |
| MD: Broken, 40 µm, blown film | 530           | %    | ISO 527-3   |
| TD: Broken, 40 µm, blown film | 620           | %    | ISO 527-3   |
| Dart Drop Impact              |               |      | ISO 7765-1  |
| 20 µm, blown film             | 190           | g    | ISO 7765-1  |
| 40 µm, blown film             | 260           | g    | ISO 7765-1  |
| Thermal                       | Nominal Value | Unit | Test Method |
| Vicat Softening Temperature   | 121           | °C   | ISO 306     |
| Melting Temperature (DSC)     | 126           | °C   | ISO 3146    |

#### Additional Information

Elmendorf, ISO 6383-2, MD, Blown Film, 20 µm: 9 N/mmElmendorf, ISO 6383-2, TD, Blown Film, 20 µm: 130 N/mmElmendorf, ISO 6383-2, MD, Blown Film, 40 µm: 17 N/mmElmendorf, ISO 6383-2, TD, Blown Film, 40 µm: 185 N/mm

| Extrusion             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 190 - 220     | °C   |
| Cylinder Zone 2 Temp. | 190 - 220     | °C   |
| Cylinder Zone 3 Temp. | 190 - 220     | °C   |
| Cylinder Zone 4 Temp. | 190 - 220     | °C   |
| Cylinder Zone 5 Temp. | 190 - 220     | °C   |

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