# ISPLEN® PB-110 H2E

Polypropylene Copolymer

REPSOL

## Message:

ISPLEN® PB-110 H2E is a block ethylene-propylene copolymer with a high molecular weight. Due to averagely good flow properties and very high mechanical properties is a suitable grade to be processed into pipes. Its very high impact strength, even at low temperatures, and stress cracking also can use in critical conditions. Other applications are corrugated pipes for sewage, due to its high modulus
ADDITIVATION
ISPLEN® PB-110 H2E contains stabilizers and additives according to the end-use of the item in order to reinforce the thermal stability and increase the hot-water extraction resistance. The processor may include other additives. Formulation allows polymer stability during the normal conditions of processing and use.
COLOURING
ISPLEN grades are supplied in natural colour but it can be easily coloured with pigments steady at processing temperatures, using dry-colouring or masterbatch techniques.
FOODSTUFF REGULATIONS
ISPLEN® PB-110 H2E is approved for food contact under certain legislation. For more information about specific country regulation, please, contact with our Technical Service.
ISPLEN® PB110H2E is a very low melt flow propylene heterophasic copolymer with a reinforced formulation for extrusion process, and a high thermal stabilisation. Its crystalline structure gives a high rigidity and very high tensile strength resistance. Its flow characteristics and mechanical properties make it specially adapted for high thickness and good glossy surface films or sheets.
It can be easily coloured during the extrusion process using the right pigments, especially in the form of masterbatches with a higher melt flow rate than that of the base polymer.
APPLICATIONS
In extrusion process requiring high melt viscosity strength and particularly high tensile properties, such as:
Sheets and Profiles
Blow-molding
Glossy surface sheets.
Pipes.
Recommended melt temperature range from 190 to 250°C. Processing conditions should be optimised for each production line.

| General Information | |
|---|---|
| Additive | Heat Stabilizer |
| Features | Block Copolymer |
| | Food Contact Acceptable |
| | Good Chemical Resistance |
| | Good Colorability |
| | Good Flow |
| | Heat Stabilized |
| | High ESCR (Stress Crack Resist.) |
| | High Molecular Weight |
| | High Rigidity |
| | High Tensile Strength |
| | Low Temperature Impact Resistance |
| | Ultra High Impact Resistance |
| Uses | Blow Molding Applications |
| | Corrugated Pipe |
| | Film |

| | |
|---|---|
| | Piping |
| | Profiles |
| | Sheet |
| Agency Ratings | EU Food Contact, Unspecified Rating |
| Appearance | Colors Available |
| | Natural Color |
| Forms | Pellets |
| Processing Method | Blow Molding |
| | Extrusion |
| | Pipe Extrusion |
| | Profile Extrusion |
| | Sheet Extrusion |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density (23°C) | 0.903 to 0.905 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) | | | ISO 1133 |
| 230°C/2.16 kg | 0.25 to 0.30 | g/10 min | |
| 230°C/5.0 kg | 1.0 to 1.2 | g/10 min | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness | 77 | | ASTM D785 |
| Shore Hardness (Shore D) | 62 | | ISO 868 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress (Yield) | 28.0 | MPa | ISO 527-2 |
| Tensile Strain (Break) | > 500 | % | ISO 527-2 |
| Flexural Modulus | 1200 to 1400 | MPa | ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength (23°C) | 55 | kJ/m² | ISO 179 |
| Notched Izod Impact Strength | | | ISO 180/1A |
| -20°C | 5.0 | kJ/m² | |
| 23°C | 40 | kJ/m² | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature (0.45 MPa, Unannealed) | 81.0 | °C | ISO 75-2/B |
| Vicat Softening Temperature | 147 | °C | ISO 306/A |
| **Extrusion** | **Nominal Value** | **Unit** | |
| Cylinder Zone 1 Temp. | 190 to 200 | °C | |
| Cylinder Zone 2 Temp. | 190 to 205 | °C | |
| Cylinder Zone 3 Temp. | 195 to 210 | °C | |
| Cylinder Zone 4 Temp. | 195 to 215 | °C | |
| Cylinder Zone 5 Temp. | 200 to 220 | °C | |

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|---|---|---|
| Melt Temperature | 190 to 250 | °C |



## Recommended distributors for this material

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