Technical Data Sheet

# *Icorene* 1490 YEW 2704

Polyethylene, Linear Medium Density

## Product Description

*Icorene* 1490 is a UV stabilised hexene linear medium density polyethylene powder. It has been developed for use as a powder in rotational moulding.This grade is a very fast processing material but also has extremely high levels of ESCR and a very wide processing window for -40C ARM impact strength.Recommended PIAT can be as low as 130C to 150C depending on the position of the thermocouple.It is suitable for use in many different applications due to its high ESCR. But it is especially good for reducing oven cycle time by up to 30%. This is done using low PIATs and can result in significantly lower energy usage heating the oven. This effect is multiplied in thicker wall section.It is easy to process with a low shrinkage tendency. Faster melting can help to distribute the material more evenly across the mould. *Icorene* 1490 is not intended for use in medical and pharmaceutical applications.

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|---|---|
| **Processing Method** | Rotomolding |
| **Attribute** | Good Flow; Good Moldability; Good Processability; Good Stiffness; Good Toughness; UV Resistant |
| **Forms** | Powder |
| **Appearance** | Unspecified Color |
| **Additive** | Antioxidant; UV Stabilizer |
| **Application** | Agricultural; General Purpose; Tanks |

| Typical Properties | Nominal Value | Units | Test Method |
|---|---|---|---|
| **Physical** | | | |
| Melt Flow Rate, (190 °C/2.16 kg) | 12 | g/10 min | ISO 1133 |
| Density, (23 °C) | 0.936 | g/cm³ | ISO 1183 |
| **Mechanical** | | | |
| Tensile Strength at Yield | 18.0 | MPa | ISO 527-2/1B |
| Environmental Stress Crack Resistance | | | |
| (Condition B, Rotational Molded, F50, 10% Igepal, 50 °C) | >500 | hr | ASTM D1693 |
| (Condition B, Rotational Molded, F50, 100% Igepal, 50 °C) | >1000 | hr | ASTM D1693 |
| Tensile Strain at Break, (23 °C) | >650 | % | ISO 527-2/1B |
| Flexural Modulus, (23 °C) | 730 | MPa | ISO 178 |
| Tensile Modulus, (23 °C) | 700 | MPa | ISO 527-2/1B |
| **Impact** | | | |
| Charpy Impact Strength - Notched, (23 °C) | 14 | kJ/m² | ISO 179-1/1eA |
| Impact Strength, (-40 °C, 3.20 mm, Rotational Molded) | >80 | J | ARM |
| Tensile Impact Strength, (-30 °C, Notched) | 73.0 | kJ/m² | ISO 8256 |
| **Thermal** | | | |
| Vicat Softening Temperature, (A (10N)) | 111 | °C | ISO 306 |
| Deflection Temperature Under Load Unannealed (0.45 MPa) | 62 | °C | ISO 75-2/B |
| DSC Melting Point | 127 | °C | ISO 3146 |