

## Technical Data Sheet

### *Polyaxis* HD 4220-35G BLACK



High Density Polyethylene

#### Product Description

*Polyaxis* HD 4220 is a high density polyethylene intended for the rotational molding industry. Offers outstanding stiffness and processability.

|                          |                                                                  |
|--------------------------|------------------------------------------------------------------|
| <b>Processing Method</b> | Rotomolding                                                      |
| <b>Attribute</b>         | Good Moldability; Good Stiffness; Hexene Comonomer; UV Resistant |
| <b>Forms</b>             | Powder                                                           |
| <b>Appearance</b>        | Colors Available                                                 |
| <b>Application</b>       | General Purpose; Outdoor Applications; Tanks                     |

| Typical Properties                                        | Nominal Value | Units             | Test Method |
|-----------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                           |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)                          | 2.0           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                | 0.940         | g/cm <sup>3</sup> | ASTM D1505  |
| <b>Mechanical</b>                                         |               |                   |             |
| Tensile Strength at Yield, (51 mm/min, Rotational Molded) | 19.3          | MPa               | ASTM D638   |
| Environmental Stress Crack Resistance                     |               |                   |             |
| (Compression Molded, F50, 100% Igepal)                    | 560           | hr                | ASTM D1693  |
| (Compression Molded, F50, 10% Igepal)                     | 40.0          | hr                | ASTM D1693  |
| Flexural Modulus, (Rotational Molded, 1% Secant)          | 896           | MPa               | ASTM D790   |
| Tensile Elongation at Break, (Rotational Molded)          | 10            | %                 | ASTM D638   |
| <b>Impact</b>                                             |               |                   |             |
| Impact Strength                                           |               |                   |             |
| (-40 °C, 3.18 mm, Rotational Molded)                      | 88            | J                 | ARM         |
| (-40 °C, 6.35 mm, Rotational Molded)                      | >258          | J                 | ARM         |
| <b>Thermal</b>                                            |               |                   |             |
| Deflection Temperature Under Load Unannealed (264 psi)    | 37.8          | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (66 psi)     | 57.2          | °C                | ASTM D648   |
| Peak Melting Temperature                                  | 129           | °C                | ASTM D3418  |

## Notes

These are typical property values not to be construed as specification limits.

## Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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