

### Technical Data Sheet



### Hyperzone HY55430S

High Density Polyethylene

#### Product Description

Hyperzone HY55430S is a high density polyethylene resin that exhibits excellent processability and environmental stress crack resistance. Typical applications include bottles for household chemicals, food products, and personal care products. This resin contains synthetic antistat.

#### Regulatory Status

For regulatory compliance information, see [Hyperzone HY55430S Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                          |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|
| <b>Status</b>            | Commercial: Active                                                                  |
| <b>Availability</b>      | Asia-Pacific; Europe; North America                                                 |
| <b>Application</b>       | Bottles For Consumer Goods                                                          |
| <b>Market</b>            | Rigid Packaging                                                                     |
| <b>Processing Method</b> | Extrusion Blow Molding                                                              |
| <b>Attribute</b>         | Excellent ESCR (Environmental Stress Cracking Resistance); Excellent Processability |

| Typical Properties                                                               | Nominal Value | English Units | Nominal Value | SI Units | Test Method   |
|----------------------------------------------------------------------------------|---------------|---------------|---------------|----------|---------------|
| <b>Physical</b>                                                                  |               |               |               |          |               |
| Melt Flow Rate                                                                   |               |               |               |          |               |
| (190 °C/2.16 kg)                                                                 | 0.34          | g/10 min      | 0.34          | g/10 min | ASTM D1238    |
| (190 °C/2.16 kg)                                                                 | 0.34          | g/10 min      | 0.34          | g/10 min | ISO 1133-1    |
| Density                                                                          |               |               |               |          |               |
| (23 °C)                                                                          | 0.954         | g/cm³         | 0.954         | g/cm³    | ISO 1183-1    |
| (23 °C)                                                                          | 0.954         | g/cm³         | 0.954         | g/cm³    | ASTM D1505    |
| <b>Mechanical</b>                                                                |               |               |               |          |               |
| Flexural Modulus                                                                 |               |               |               |          |               |
| (1% Secant)                                                                      | 190000        | psi           | 1310          | MPa      | ASTM D790     |
| (1% Secant)                                                                      |               |               | 1120          | MPa      | ISO 178       |
| Tensile Modulus                                                                  |               |               | 1150          | MPa      | ISO 527-1, -2 |
| Tensile Strength at Yield                                                        | 4000          | psi           | 27.6          | MPa      | ASTM D638     |
| Tensile Stress at Yield                                                          |               |               | 26            | MPa      | ISO 527-1, -2 |
| Tensile Elongation at Break                                                      | >1000         | %             | >1000         | %        | ASTM D638     |
| Tensile Strain at Yield                                                          | 9             | %             | 9             | %        | ISO 527-1, -2 |
| Environmental Stress Crack Resistance, F <sub>50</sub><br>(100% Igepal®, Cond B) | 200           | hr            | 200           | hr       | ASTM D1693    |
| FNCT, (6.0 MPa, 2% Arkopal N100, 50 °C)                                          | 12            | hr            | 12            | hr       | ISO 16770     |
| <b>Impact</b>                                                                    |               |               |               |          |               |
| Tensile Impact Strength                                                          | 140           | ft-lb/in²     | 294           | kJ/m²    | ASTM D1822    |
| <b>Hardness</b>                                                                  |               |               |               |          |               |
| Shore Hardness                                                                   |               |               |               |          |               |
| (Shore D)                                                                        | 68            |               | 68            |          | ISO 868       |
| (Shore D)                                                                        | 68            |               | 68            |          | ASTM D2240    |



### Thermal

|                                              |          |         |              |
|----------------------------------------------|----------|---------|--------------|
| Vicat Softening Temperature                  | 259 °F   | 126 °C  | ASTM D1525   |
| (A50)                                        |          | 127 °C  | ISO 306      |
| (B50)                                        |          | 75 °C   | ISO 306      |
| Low Temperature Brittleness, F <sub>50</sub> | <-105 °F | <-76 °C | ASTM D746    |
| Deflection Temperature Under Load            |          |         |              |
| (66 psi, Unannealed)                         | 151 °F   | 66 °C   | ASTM D648    |
| (0.45 MPa, Unannealed)                       |          | 73 °C   | ISO 75-1, -2 |

### Additive

|          |         |         |            |
|----------|---------|---------|------------|
| Antistat | Present | Present | LYB Method |
|----------|---------|---------|------------|

| Product  | Antistat(ppm) |
|----------|---------------|
| HY55430  | None          |
| HY55430S | Present       |

### Notes

Igepal® is a registered trademark of Rhodia.

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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