# CERTENE™ HGB-0454

High Density Polyethylene

Muehlstein

## Message:

HGB-0454 is a certified prime Gas Phase process BLOW MOLDING copolymer designed to meet end-use requirements of containers for packaging of Household Industrial Chemicals (HIC). HGB-0454 features medium swell, easy and consistent processability in conventional continuous or intermittent extrusion equipment, and excellent balance of bottle ESCR, Impact strength and Stiffness. Applications include medium size containers for detergents, bleach, antifreeze, motor oil and ice chests. HGB-0454 recommended processing temperature is 160 to 180°C., with mold at 10 to 30°C. HGB-0454 conforms with FDA regulation21CFR 177.1520 (c) 3.1(a) + 3.2(a) and most international regulations concerning polyethylene use in contact with food articles.

| General Information | | | |
|---|---|---|---|
| Features | Rigidity, high<br>High ESCR (Stress Cracking Resistance)<br>Copolymer<br>Impact resistance, good<br>Workability, good<br>Good chemical resistance<br>Compliance of Food Exposure | | |
| Uses | Blown Containers<br>Blow molding applications<br>Container | | |
| Agency Ratings | FDA 21 CFR 177.1520(c) 3.1a<br>FDA 21 CFR 177.1520(c) 3.2a | | |
| Forms | Particle | | |
| Processing Method | Blow molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density | 0.954 | g/cm³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.30 | g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance [1] (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50) | 60.0 | hr | ASTM D1693B |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength [2] (Yield, Compression Molded) | 27.0 | MPa | ASTM D638 |
| Tensile Elongation [3] (Yield, Compression Molded) | 1000 | % | ASTM D638 |
| Flexural Modulus - 1% Secant [4] (Compression Molded) | 1170 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |

| | | | |
|---|---|---|---|
| Tensile Impact Strength (23°C, Compression Molded) | 205 | kJ/m² | ASTM D1822 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (0.45 MPa, Unannealed) | 74.0 | °C | ASTM D648 |
| Brittleness Temperature | < -90.0 | °C | ASTM D746 |
| Vicat Softening Temperature | 127 | °C | ASTM D1525 |
| **Additional Information** | **Nominal Value** | **Unit** | |
| Blow Molding Mold Temperature | 10 - 30 | °C | |
| Blow Molding Temperature | 160 - 180 | °C | |
| Test specimens from compression molded plaque according to ASTM D 1928 Procedure C. | | | |
| **NOTE** | | | |
| 1. | Notched Bent Strip | | |
| 2. | 50 mm/min | | |
| 3. | 50 mm/min | | |
| 4. | 1.3 mm/min | | |



## Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China