

## High Density Polyethylene

# HB33531 / HB23551



EVALENE<sup>®</sup> HB33531 and EVALENE<sup>®</sup> HB23551 are High Density Polyethylene grades designed for blow molding applications that require superior toughness and excellent chemical resistance.

### FEATURES

- Good Environmental Stress Crack Resistance (ESCR)
- Excellent top load strength
- Good drop impact
- Consistent shrinkage
- Meet Philippine FDA food contact requirements
- Halal-certified

**EVALENE<sup>®</sup> HB33531** provides excellent machine throughput while maintaining a good balance of ESCR performance, top load strength and impact strength which addresses the packaging needs of several industries from health care, personal care, cooking oil, beverage, condiments, to automobile (lubricants), household (bleach), and industrial chemical containers.

### TYPICAL APPLICATIONS

- Rigid packaging
- Bottles for Household & Industrial Chemicals (HIC)
- Bottles for Personal Care products
- Bottles for Cooking Oil

**EVALENE<sup>®</sup> HB23551** delivers superior environmental stress crack resistance (ESCR), good top-load strength and good impact resistance that meet the very stringent requirements of household & industrial chemicals (HIC) packaging. Common applications for HIC packaging are motor oils, lubricants, automotive fluids as well as bleach.

## Product Properties

Property	Test Condition	Standard	HB33531	HB23551	Unit
Flow Index*	190°C / 21.6kg <sup>1</sup>	ASTM D1238	33	23	g/10 min.
Melt Index*	190°C / 2.16kg	ASTM D1238	0.39	0.27	g/10 min.
Density	23°C	ASTM D1505	0.953	0.955	kg/cm <sup>3</sup>
Tensile Strength at Yield**	50 mm/min	ASTM D638	35	40	MPa
Tensile Strength at Break**	50 mm/min	ASTM D638	20	26	MPa
Elongation at Yield**	50 mm/min	ASTM D638	19	19	%
Elongation at Break**	50 mm/min	ASTM D638	46	104	%
Tensile Modulus**	1% Secant, 5 mm/min	ASTM D638	1741	1951	MPa
Flexural Modulus**	1% Secant, 1.3 mm/min	ASTM D790	923	1036	MPa
ESCR, F50	Cond B. (50°C, 10% Igepal)	ASTM D1693	17	24	Hours
Hardness, Shore D		ASTM D2240	62	65	Shore D

\*Product is controlled by Flow Index. Melt Index is estimated for customer use

\*\* Properties measured on Injection Molded ASTM Type I samples

### Typical Processing Conditions:

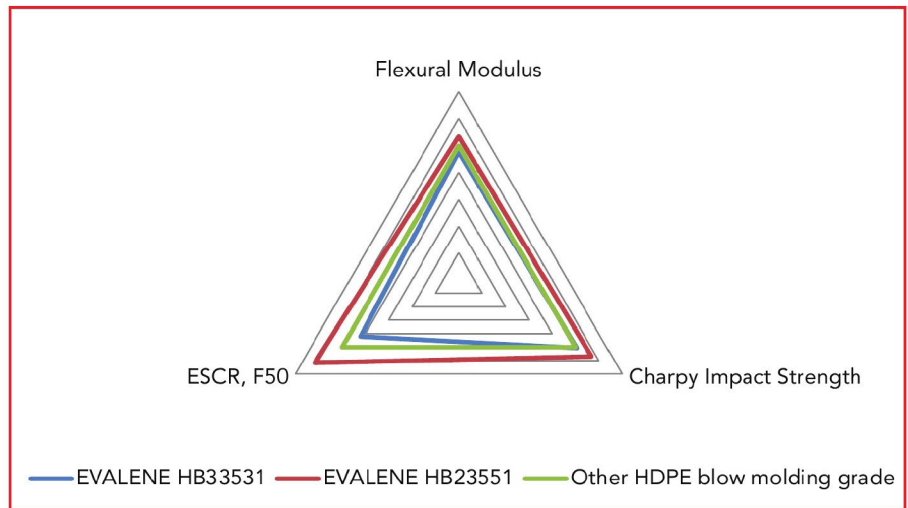
Extrusion temperature: 175 - 200 °C (HB33531)

180 - 200 °C (HB23551)

### Resin Property Comparison: EVALENE® HB33531 and HB23551 and other HDPE blow molding grade

**EVALENE® HB33531** offers an outstanding combination of good environmental stress crack resistance (ESCR), good drop impact, rigidity and short cycle times.

**EVALENE® HB23551** offers better top-load strength due to its higher flexural modulus compared to the other HDPE blow molding grade. Combined with excellent impact strength and environmental stress crack resistance (ESCR), this makes it ideal for more demanding applications.



#### Disclaimer:

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