

Producer: Quattor / Brazil

HF-4810

Description:

QUATTOR® HF-4810 is a high molecular weight, high-density polyethylene, hexene copolymer, produced through Unipol® process and recommended for blown film extrusion and blow molding of bottles and drums for agricultural products.

Films produced using **QUATTOR® HF-4810** have excellent processability, high bubble stability, and a remarkable sealability.

Bottles and drums obtained using **QUATTOR® HF-4810** exhibit an improved impact resistance and stress cracking resistance (ESCR).

Processes and typical application:

Applications: grocery and merchandise bags, trash and can liners, bottles and drums for agricultural products.

Recommended processing conditions for extrusion: temperature profile 180 to 210°C; minimum thickness: 10µm per wall; blow-up ratio: 3.5:1 to 4.500; frostline height: 6 to 8x die diameter.

Recommended processing conditions for blow molding: temperature profile 180 to 190°C (feeding zone); 190 to 200°C (barrel/head/die); maximum mold temperature: 30°C

Additives:

Antioxidants, Processing Aid

Nominal Physical Properties:

PROPERTIES	VALUE	UNIT	ASTM METHOD
Physical			
Melt Index (190°C/21.6kg)	10.0	g/10min	D-1238
Density	0.948	g/cm ³	D-792
Film^A			
Tensile Strength at Yield Point (MD/TD)	25/27	MPa	D-882
Tensile Strength at Break (MD/TD)	59/43	MPa	D-882
Elongation at Yield (MD/TD)	5/7	%	D-882
Elongation at Break (MD/TD)	562/750	%	D-882
Elmendorf Tear Strength (MD/TD)	9/30	Kgf/cm	D-1922
Dart Drop Impact	141	gf-50°F	D-1709A
1% Secant Modulus (MD/TD)	778/858	Mpa	D-882
Mechanical^B			
Tensile Strength at Yield Point	25	MPa	D-638
Tensile Strength at Break	27	MPa	D-638
Elongation at Yield	10	%	D-638
Elongation at Break	1250	%	D-638



HF-4810

PROPERTIES	VALUE	UNIT	ASTM METHOD
Flexural Modulus (Young)	963	MPa	D-790
Izod impact resistance	0.948	J/m	D-256
Izod impact resistance	537	MPa	D-638
ESCR ^C	>1000	h-50%F	D-1693
Hardness	61	Shore D	D-2240
Thermal			
455KPa -HDT	60	°C	D-648
Vicat Softening Temperature	125	°C	D-1525

Comments:

^A Film thickness: 12.5µm; BUR: 3.5:1; FLH: 6x diameter

^B Compression-molded plaques according to ASTM D-1928.

^C 50°C, 100% Igepal.