YUHWA HIDEN® U(V)HMWPE grades are Ultra(Very) high molecular weight polyethylene resins developed by KPIC. YUHWA HIDEN® U(V)HMWPE Grades are suitable mainly for compression molding but also for extrusion of sheets, profiles and blocks, and for high modulus filaments and porous products.

Characteristics

- Excellent wear resistance
- Excellent friction coefficient
- Excellent stress crack resistance
- Very good chemical resistance
- Water absorption zero
- Outstanding impact strength


Applications

- Profiles & Sheets
  - Machines (bearing, conveyer components)
  - Chemical industry (bellows, pipes)
  - Linings (Lining of bunkers, silos and hopper)
  - Electrical industry (pump packaging, insulating components)
  - Leisure, sports (skating rinks, bowling alleys)
  - Artificial joint & legs
- Special Products
  - High-modulus filaments (ballistic fabric, rope)
  - Porous applications (absorbents, filters)
  - Special additives and coating
- Secondary Battery separators
  - SLI polyethylene separator
  - LiBS (Lithium battery separator) - VHMWPE



U(V)HMWPE Grades

Grade	Average Mv (10^6 g/mol)	Properties	Processing & Application
VH035 (VHMWPE)	0.6	Excellent property spectrum	LiBS (Lithium 2nd battery separator)
U010 T	0.4~1	Good property & processibility balance	Diverse applications (Compression molding, ram extrusion…)
U015 T	1~2		
U030	3	Excellent property spectrum	
U050	5		Compression molding, ram extrusion, battery separators
U050 F			Fiber application
U050 X			Screw extrusion
U070	7	Higher wear resistance than U050	Compression molding, ram extrusion, battery separators
U090 (U090L)	9	Higher wear resistance than U070	

Resin Properties

Item	Unit	Test Method	Test Specimen	Grades							
				VH035	U010 T	U015 T	U030	U050	U070	U090	U090L
Density	g/cm³	ASTM D1505	Sheet	0.95	0.95	0.94	0.93	0.93	0.93	0.93	0.93
Average Mv	10^6 g/mol	KPIC Method	-	0.6	0.4~1	1~2	3	5	7	9	9
Bulk Density	g/cm³	ISO 60	Powder	0.42	0.43	0.43	0.45	0.45	0.45	0.45	0.45
Avg. Particle Size	μm	KPIC Method	Powder	130	110~180		130	130	130	130	190

* Additives for basic grades : Calcium Stearate

* Above data are intended to serve as guides only, and are not sales specification limits.

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