Caps & Closures

InnoPlus by GC

Rigid Packaging

Bottled Water | Carbonated Soft Drinks (CSD) | Non- Carbonated Soft Drinks (non-CSD) | Food & Beverage | Home and Personal Care (HPC)

InnoPlus: HDPE							
Properties	Test Method	Unit	Caps & Closures				
			HD1010J	HD1600JP	HD2401C	HD2200JP	HD3200C
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	20	12	7	3.5	2.3
Density	ASTM D1505	g/cm³	0.956	0.958	0.964	0.961	0.967
Melting Temperature	ASTM D3418	°C	130	132	136	135	132
Tensile Strength at Yield	ASTM D638	kg/cm²	290	290	310	310	310
Tensile Strength at Break	ASTM D638	kg/cm²	140	200	175	210	200
Elongation at Break	ASTM D638	%	200	230	750	>1,000	150
Flexural Modulus	ASTM D790	kg/cm²	12,000	12,500	15,000	14,500	17,000
Notched Izod Impact Strength	ASTM D256	kg.cm/cm	4 (C*)	3 (C*)	4 (C*)	5 (C*)	2.5 (C*)
Durometer Hardness	ASTM D2240	shore D	64	64	65	66	67
Vicat Softening Point	ASTM D1525	°C	122	120	127.5	126	123
ESCR; 10% Igepal, F_{50}	ASTM D1693	Hours	Initial	3	6	4	15
Slip Agent			No	No	No	No	No
End Product			Non-CSD /Food/HPC	Bottled Water/ Non-CSD			
Product Highlight			Over caps, Screw spout caps, Flip spout caps. Excellent processability for high complexity mold design with organoleptic proper ty.	Beverage caps and closures for mineral and still water, juice, tea or liquid dairy with organoleptic property. Compatible with injection and compression processings.			

Note : *C = Complete Break *P = Partial Break *NB = Non Break

InnoPlus: HDPE							
Properties	Test Method	Unit	Caps & Closures				
			HD3000C	HD3001C	HD3500C	HD3502C	HD4502C
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	2	2	1	1	0.5
Density	ASTM D1505	g/cm³	0.954	0.954	0.956	0.956	0.957
Melting Temperature	ASTM D3418	°C	132	132	130	130	130
Tensile Strength at Yield	ASTM D638	kg/cm²	260	260	240	240	276
Tensile Strength at Break	ASTM D638	kg/cm²	320	320	270	270	268
Elongation at Break	ASTM D638	%	900	900	>1,000	>1,000	900
Flexural Modulus	ASTM D790	kg/cm²	11,300	11,300	11,500	11,500	11,800
Notched Izod Impact Strength	ASTM D256	kg.cm/cm	5 (P*)	5 (P*)	6 (NB*)	6 (NB*)	6.8 (NB*)
Durometer Hardness	ASTM D2240	shore D	62	62	62	62	62
Vicat Softening Point	ASTM D1525	°C	122	122	120	120	120
ESCR; 10% Igepal, F_{50}	ASTM D1693	Hours	24	24	460	460	>1,000
Slip Agent			Yes	No	Yes	No	No
End Product			Bottled Water/ Non-CSD/CSD		CSD		
Product Highlight			Beverage caps and closures for CSD and Functional Sparkling with organoleptic property. Compatible with injection and compression processings.				Lightweight CSD caps and closures with organoleptic property, superior stress cracking resistance. Compat-ible with injection and compression processings.

Note : *C = Complete Break *P = Partial Break *NB = Non Break

InnoPlus: LLDPE			
Properties	**Test Method**	**Unit**	**Caps & Closures**
			LL8420A
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	20
Density	ASTM D792	g/cm³	0.924
Molded Plague Properties			
Tensile Strength at Yield	ASTM D638	MPa	15
Tensile Strength at Break	ASTM D638	MPa	10
Elongation at Break	ASTM D638	%	700
Vicat Softening Point	ASTM D1525	MPa	92
Durometer Hardness	ASTM D2240	Shore D	53
ESCR; 25% Igepal, F_{50}	ASTM D1693	Hours	-
Slip Agent			No
End Product			Food/HPC
Product Highlight			Flip top caps, Lids, Pull Ring caps for Edible Oils, Dairy etc., Hinge caps. Excellent processability.

InnoPlus: LDPE				
Physical Properties	**Test Method**	**Unit**	**Caps & Closures**	
			LD2026K(2)	**LD2426K(2)**
MFR (190 °C, 2.16 kg)	ISO 1133	g/10 min	4	4
Density	ISO 1183	g/cm3	0.920	0.924
Melting Temperature	ISO 11357	°C	109	112
Vicat Softening Point	ASTM D1525	°C	88	92
Slip Agent			Yes	Yes
End Product			Food/HPC	
Product Highlight			Flip top caps, Lids, Pull Ring caps for Edible Oils, Dairy etc., Hinge caps. Excellent processability.