CHEMISTRY THAT MATTERS™

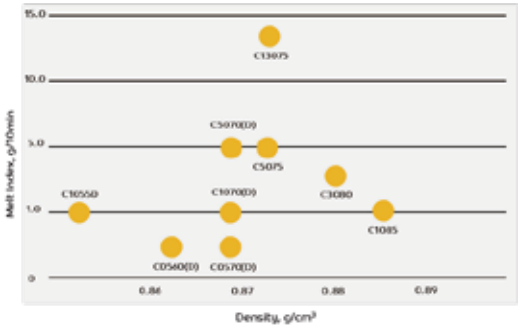
FORTIFY™ POLYOLEFN ELASTOMERPRODUCT SELECTION GUIDE

FORTIFY Polyolefin Elastomers (POEs) are a family of ethylene octene copolymer produced using SABIC's proprietary NEXLENE™ metallocene technology. They can offer customers improvedimpact performance, melt strength, and processability over a broad spectrum of markets and applications. Used neat or as polymer modifiers, FORTIFY POEs offer endless possibilities to bring value to you products. The product portfolio includes over a wide range of melt index and density to serve customers unique needs.

FORTIFY POE Features

- Low crystallinity and low Tg which provides high impact strength at low temperature
- Low modulus/high flexibility – Comparable to traditional elastomers
- Excellent physical properties (toughness, puncture resistance)
- Good Processability in compounding / polymer modifica tion processes
- Good compatibility with other polyolefin products
- Excellent electrical properties (volume resistance etc)

FORTIFY Polyolefin Elastomer Products[a,b]



[a] Typical properties, all properties were measured from specimens cut from compression molding samples, not to be constructed as specification limits; customers should confirm the product performance by their own tests;
[b] All grades shown are commercialized as FORTIFY POE products;

Typical properties of FORTIFY POE grade[a]

Property	C1055D[b]	C0560(D)[b]	C0570(D)[b]	C1070(D)[b]	C5070(D)[b]	C5075[c]	C13075[c]	C3080	C1085
Melt Index (190°C/2.16KG), g/10min, ASTM D1238	1.0	0.5	0.5	1.0	5.0	5.0	13.0	3.0	1.0
Melt Flow Rate (230°C/2.16KG), g/10min, ASTM D1238	2.2	0.9	0.9	2.0	11.0	11.0	27.0	6.0	2.0
Density, g/cm3, ASTM D792	0.857	0.863	0.868	0.868	0.868	0.873	0.873	0.880	0.885
Mooney Viscosity, MU (ML 1+4 @ 121°C) ASTM D1646	24	36	36	22	8	8	3	11	21
Hardness, Share A, ASTM D2240	55	64	74	71	63	75	74	78	81
Hardness, Share D, ASTM D2240	12	17	23	21	16	22	21	24	29
Tensile Strength, MPa, ASTM D638	3.1	6.1	10.3	9.3	6	8	7	11.8	16.7
Elongation @ Break, %, ASTM D638	>1000	>1000	800	850	>1000	>800	>800	900	700
100% Modulus, MPa, ASTM D638	1.4	1.9	3.1	2.9	2.3	3.0	2.5	3.3	4.6
Flexural Modulus-1% Secant, MPa, ASTM D790	4.4	8.8	15.2	13.2	10.8	12	7.5	19.6	29.4
Tear Strength, kN/m, ASTM D624	27.5	33.3	45.1	39.2	35.3	35	30	41.2	58.8
Peak Melt Temperature, °C, SABIC Internal method[c]	37	45	59	62	62	69	68	68	74
Glass Transition Temperature, °C, SABIC Internal method[d]	-59	-56	-54	-52	-52	-54	-54	-49	-47
Volume resistance, Ω.cm, SABIC Internal method[d]	NA	NA	NA	NA	NA	>10E+16	>10E+16	NA	NA

[a] Typical properties, all properties were measured from specimens cut from compression molding samples, not to be constructed as specifica tion limits; customers should confirm the product performance by their own tests;
[b] Grades with D are PO powder dusted to improve product handling;
[c] Dedicated PV grades for encapsulation application;
[d] SABIC internal method, full protocols and results available per request.

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