DOW ENGAGE™ Polyolefin Elastomers are compatible with most polyolefin materials and can be used to improve properties such as toughness, impact, softness and flexibility. They are well suited for use in both rigid and soft TPO formulations and can provide high impact even at cold temperatures. The ENGAGE™ grade slate includes ethylene octene, ethylene butene, high melt strength and the higher performance ENGAGE™ XLT product.

ETHYLENE OCTENE GRADES

PROPERTY	ASTM Method	8842	8180	8137	8150 8157	8100 8107	8200 8207	8407	8452	8411	8003	8401	8440G	8480	8450 8450G	8402	8540G
Density, g/cc	D792	0.857	0.863	0.864	0.868	0.870	0.870	0.870	0.875	0.880	0.885	0.885	0.897	0.902	0.902	0.902	0.908
Melt Index, g/10 min. 190°C/2.16kg	D1238	1	0.5	13	0.5	1	5	30	3	18	1	30	1.6	1	3	30	1
Mooney Viscosity, MU (ML 1+4 @ 121°C)	D1646	25	37	4	33	24	8	2	11	3	23	2	13	20	10	2	20
Total Crystallinity, %	---	13	13	13	13	18	19	21	20	24	25	25	27	33	29	34	34
Hardness, Shore A	D2240	54	63	63	70	73	66	72	74	81	84	84	86	89	90	88	90
Hardness, Shore D	D2240	11	16	13	20	22	17	20	24	27	31	26	36	42	43	34	47
DSC Melting Point, °C	---	38	47	56	55	60	59	65	66	76	77	80	93	99	97	96	104
Glass Transition Temp, °C	---	-58	-55	-55	-52	-52	-53	-54	-51	-50	-46	-47	-33	-31	-32	-36	-32
Haze, %	D1003	---	2	---	4	9	2	---	2	8	10	6	11	17	23	45	56
2% Secant Flexural Modulus, MPa	D790	4.0	7.7	7.3	14.4	13.1	10.8	10.5	16.8	20.5	32.6	30.6	54.3	81.5	78.3	72.0	107.8
Ultimate Tensile Strength, MPa	D638	3.0	6.3	2.4	9.5	9.8	5.7	2.8	11.2	7.3	18.2	8.5	20.4	24.8	22.4	11.3	27.9
Ultimate Tensile Elongation, %	D638	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600	>600

DOW ENGAGE™ POLYOLEFIN ELASTOMERS

PROPERTY	ASTM Method	ETHYLENE BUTENE GRADES						HIGH MELT STRENGTH GRADES				XLT GRADE
		7467	7457	7447	7367	7270	7256	HM 7487	HM 7387 ENR 7380	HM 7280	HM 7289	XLT 8677
Density, g/cc	D792	0.862	0.862	0.865	0.874	0.880	0.885	0.860	0.870	0.884	0.891	0.870
Melt Index, g/10 min. 190°C/2.16kg	D1238	1.2	3.6	5	0.8	0.8	2.5	<0.5	<0.5	<0.5	<0.5	0.5
Mooney Viscosity, MU (ML 1+4 @ 121°C)	D1646	19	9	7	24	24	13	47	54	42*	74*	45
Total Crystallinity, %	---	12	13	13	16	19	23	13	16	25	28	13
Hardness, Shore A	D2240	52	50	64	65	80	84	58	66	84	88	51
Hardness, Shore D	D2240	12	12	12	23	26	30	14	22	29	31	11
DSC Melting Point, °C	---	34	40	35	51	64	76	37	50	99	99	118
Glass Transition Temp, °C	---	-58	-56	-53	-51	-44	-42	-57	-52	-46	-52	-65
Haze, %	D1003	---	---	---	---	3	6	---	56	---	---	---
2% Secant Flexural Modulus, MPa	D790	4.0	4.7	7.6	14.2	22.1	33.6	1.2	11.5	25.3	43.5	6.3
Ultimate Tensile Strength, MPa	D638	2.0	1.8	2.4	5.2	13.9	9.3	2.4	9.1	5.1	3.7	3.0
Ultimate Tensile Elongation, %	D638	>600	>600	>600	>600	>600	>600	>600	>600	310	200	>1000

* Measured at 150° C

Common Applications

- Automotive rigid TPOs with outstanding low temperature impact performance for interior & exterior applications
- Wire & cable coatings with enhanced physical properties
- Molded goods, such as packaging, toys or other household items
- Automotive interiors soft TPOs for excellent haptics & flexibility
- Footwear foams that are light & deliver excellent resiliency & cushioning to the shoe
- Profile extruded goods such as tubing that is flexible & transparent