

Product Data Sheet

SUPRENE[®] 7486F

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SUPRENE EPDM 7486F is a non-oil extended grade with very high Mooney viscosity and extra high ENB content.

SUPRENE EPDM 7486F shows excellent extrusion processability due to its tailored molecular architecture and its moderate ethylene content gives a better flexibility under low temperature condition, compared with high ethylene grades. Especially, controlled cellular structure with dimensional stability can be realized with fast curing performance with this high ENB grade.

SUPRENE EPDM 7486F is suitable for sponge application made by continuous vulcanization such as window seal, body seal for automotive and adiabatic sponge.

Raw Polymer Properties

	Test Method	Unit	Min.	Max.	Typical Value
Mooney Viscosity, (ML 1+4, 150 °C unmilled)	ASTM D1646	-	63	71	67
Ethylene Content *	ASTM D3900	wt%	58	62	60
ENB Content	ASTM D6047	wt%	8.0	10.0	9.0
Specific Gravity	ASTM D792	-	-	-	0.86
Volatile Matter	ASTM D5668	wt%	-	0.8	-
Ash	ASTM D5667	wt%	-	0.15	-
Physical Form, (kg/bale)	-	-	-	-	Friable Bale (25 kg/bale)

* Ethylene Content + Propylene Content = 100%

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Typical Properties

Properties	Test Method	S7486F
Mooney Viscosity ML 1+4 @ 150°C	ASTM D1646	67.0
Ethylene Content, wt%	ASTM D3900	60.0
ENB Content, wt%	ASTM D6047	9.0

Guide Formulation

	S7486F
S7486F	100.0
GPF (N660)	90.0
CaCO ₃	30.0
P-6 Oil	76.0
ZnO	5.0
Stearic Acid	1.0
MBT(M)	1.5
TMTD(TT)	1.0
ZnBDC(BZ)	1.5
Sulfur	1.5
B.A OBSH	2.0
AC 330	1.0
Total	310.5

* Unit: phr

Properties	Test Method	S7486F
Compound Mooney Viscosity ML 1+4 @ 100°C	ASTM D1646	44.0
Pre-vulcanization characteristics Large Rotor at 125°C	ASTM D1646	
Minimum Viscosity (Vm)		27.7
t'5 (min)		8.25
t'35 (min)		11.82
Δt30		3.57
Rotorless Cure Meter (MDR, 160°C/30min)	ASTM D5289	
M _L (lb·in)		1.5
M _H (lb·in)		19.9
t _{S2} (min)		0.87
t _{C50} (min)		2.40
t _{C90} (min)		13.04

Cured at 160°C for 20 min

Properties	Test Method	S7486F
Specific Gravity	ASTM D792	1.16
Hardness (shore A)	ASTM D2240	64
Tensile Strength (kgf/cm ²)	ASTM D412	123
Elongation (%)	ASTM D412	373
100% Modulus (kgf/cm ²)	ASTM D412	30.9

Heat Resistance

Properties	Test Method	S7486F
Hardness (Change Point)	ASTM D2240	+5
Tensile Strength (Change %)	ASTM D412	-9
Elongation (Change %)	ASTM D412	-35

* After 72 hours oven aging at 120 °C per ASTM D573

Compression Set

Properties	Test Method	S7486F
Compression Set (%)	ASTM D395 (Method B)	
After 72 hours at 100°C		38.7

Foam Extrusion

Properties	Test Method	S7486F
Specific Gravity	ASTM D792	0.51
Average Cell Size (µm)	-	95.7
Compression Set (%)	ASTM D395 (Method B)	
After 72 hours at 100°C		55.6

* UHF: 250°C, Microwave 1.0kW, HAV: 180°C, Line Speed 1.5m/min

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