

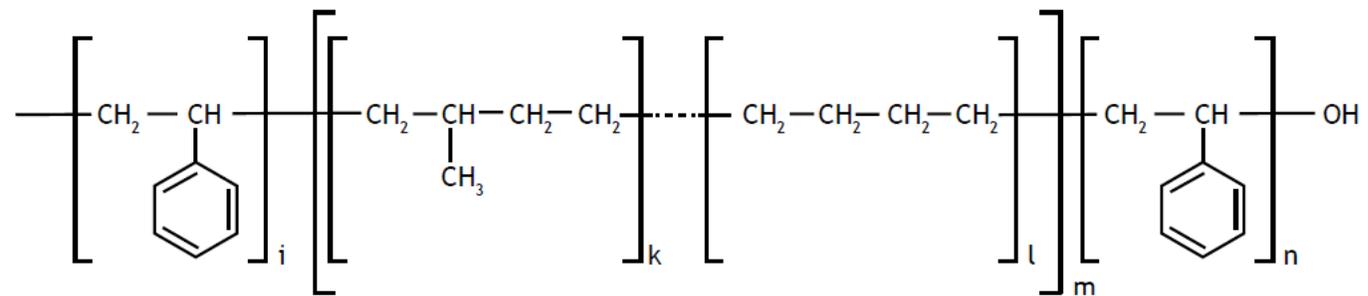
Introduction of SEPTON™ HG-252 ~Hydroxyl Terminated Styrenic Thermoplastic Rubber~

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Characteristics of SEPTON™ HG-252

- ✓ A primary hydroxyl group at the polymer terminal
- ✓ Reactivity and affinity to polar resins
- ✓ One-ended functional group can prevent gelation.
- ✓ Maintains good affinity to non-polar resins like polyolefins



Typical Properties of SEPTON™ HG-252

	Units	SEPTON™ HG-252	Method
Type	-	SEEPS-OH	
Styrene Content	wt%	28	
Specific Gravity	-	0.90	ISO 1183
Hardness (Type A)	-	80	ISO 7619 as reference
Tensile Strength ⁽¹⁾	MPa	25	ISO 37 ss reference
Elongation ⁽¹⁾	%	500	
MFR ⁽²⁾	g/10 min	6	ISO 1133 as reference

(1) Cross-head speed: 500 mm/min at 23 deg. C

(2) 200 deg. C, 2.16 kg

Modification of Ionomer Resin using SEPTON™

Raw Materials

Ionomer Resin HIMILAN™ 1557 (DOW-MITSUI POLYCHEMICALS CO.,LTD.)
(Pre-drying: 80 deg. C for 12 hours)
HSBC SEPTON™ 2002 (Styrene content=30 wt%, SEPS)
SEPTON™ HG-252 (Styrene content=28 wt%, SEEPS-OH)

Mixing condition

Equipment	Twin screw extruder (Screw diameter 25φ, L/D=25)
Compounding temperature	200 deg. C
Screw rotation	100 rpm

Molding condition

Equipment	Injection molding machine
Temperature	Cylinder 200-220 deg. C Mold 50 deg. C

Modification of Ionomer Resin using SEPTON™

Test conditions

MFR:	ISO 1133 (230 deg. C, 2.16 kg)
Hardness:	ISO 7619
Tensile test:	ISO37 (500 mm/min, 25 deg. C)
Rebound resilience:	25 deg. C
Cut Resistance:	

V-cut method with cut resistance machine for golf ball (Dumbbell Co., Ltd) loaded 2.5 kg (height 80 cm) is used.

The cut length on the surface of test specimen is measured after cut resistance test. Shorter length means better cut resistance.

Modification of Ionomer Resin using SEPTON™

		1	2	3
Formulations		by wt		
HIMILAN™ 1557		100	70	70
SEPTON™ HG-252		—	30	—
SEPTON™ 2002		—	—	30
Properties				
MFR (230 deg. C, 2.16 kg) g/10 min		11	13	18
Hardness (Type A)		53	43	42
Mechanical Properties				
Tensile Modulus		MPa	200	100
Tensile Strength		MPa	27	28
Rebound resilience		%	60	60
Cut Resistance		mm	14	16

SEPTON™ HG-252 contributes to the softening of ionomer resins without the reduction of flow-ability, tensile strength, rebound resilience, and cut resistance.

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