

***Soarnol***®

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ETHYLENE-VINYLAICOHOL COPOLYMER

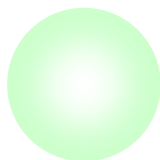


**H4815**

**H4815B**

48 mol% Ethylene Content





## [General Description]

Soarnol H4815(B) is one of the standard grades of “Soarnol®”, its ethylene content is 48 mol% with a high MFR(melt flow rate).

Soarnol H4815(B) has the best water resistance of all Soarnol grades and good gas barrier property, especially in high humidity environments. Its gas barrier property is not drastically lower at high humidity. This resin is used in coextruded film, coextrusion coating and shrink packaging.

## [General Properties]

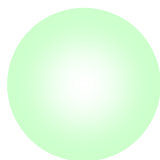
<i>Property</i>	<i>Unit</i>	<i>Value</i>
Ethylene Content	mol%	48
MFR <sup>1)</sup> (@210deg C, 2160g)	g/10min	16
Volatile Matter	%	< 0.3
Melting Point <sup>2)</sup>	deg C	158
Crystallization Temperature <sup>2)</sup>	deg C	138
Oxygen Permeability <sup>3)</sup>	cc 20 $\mu$ m / m <sup>2</sup> day atm	4.8
20deg C-75%RH	cc·mil/100inch <sup>2</sup> ·day·atm	0.244
WVTR	g 30 $\mu$ m / m <sup>2</sup> 24hrs	12-25
40deg C-90%RH		

1): Measured with Melt Indexer

2): Measured with DSC, both heating and cooling speeds of 10deg C /min

3): Measured with OXTRAN 10/50 (MOCON)





[Melt Viscosity]

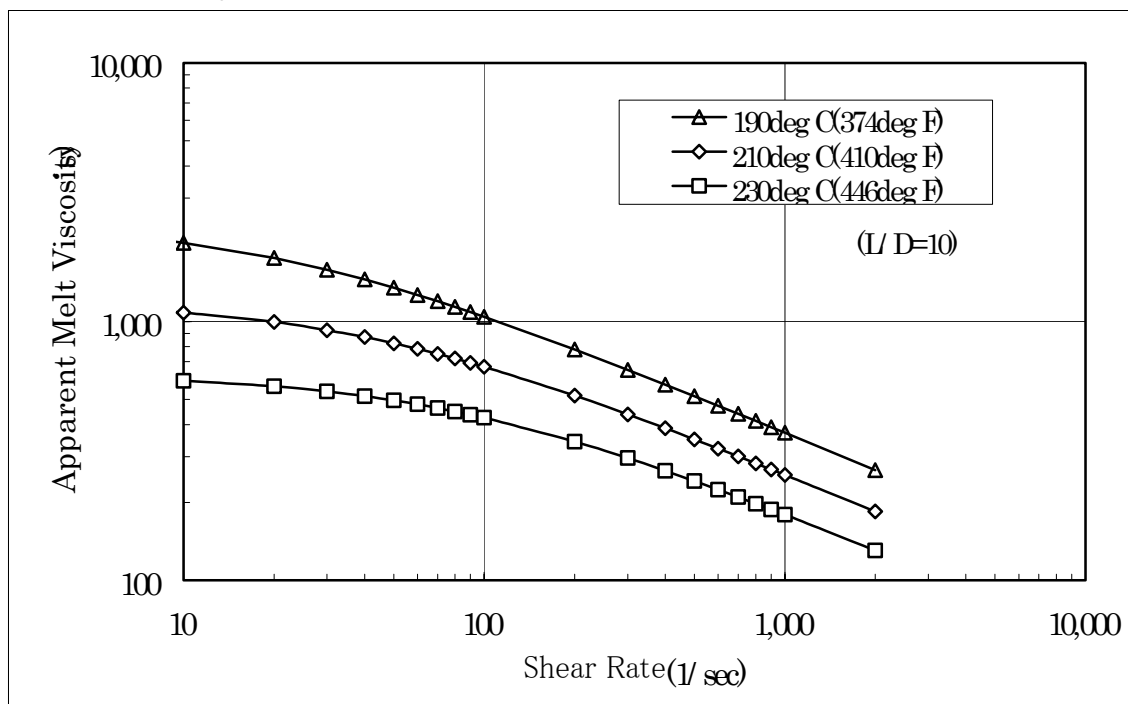


Fig.1 Melt Viscosity of Soarnol H4815 (B)

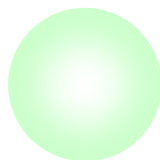
[Example of Processing]

- Extruder: 40 mm  $\phi$  single screw extruder, L/D = 28
- Screw: Full-flighted, constant pitch type, CR = 3.5
- Screen pack: 80/120/50 mesh
- Die: Manifold type, die width = 450 mm, lip clearance = 0.2 mm

Processing Temperature: deg C(deg F)

C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	Head	Die
170	190	210	220	220	220	190-220
(338)	(374)	(410)	(428)	(428)	(428)	(374-428)





## [Hygienic Performance of Soarnol H4815(B)]

Soarnol H4815(B) contains no heavy metals or other harmful substances.  
Soarnol H4815 (B) meets the Food Sanitation Standards of various countries.

Japan: Ministry of Health and Welfare Announcement No.370(Dec. 28,1959)  
and Its Latest Amendment No.18(Jan. 31,1994)

Self-Restrictive Requirements on Food-Contacting Articles

Made of Polyolefins and Certain Polymers

U.S.A.: FDA 21CFR 177.1360(a)(3) and 175.105

E U: European Commission Directive 90/128/EEC,  
and Its Latest Amendment

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