



Soarnol®

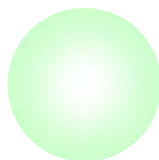
ETHYLENE-VINYLAICOHOL COPOLYMER



ET3803

38 mol% Ethylene Content





[General Description]

Soarnol ET3803 is one of the standard grades of “Soarnol®”, its ethylene content is 38 mol% with a low MFR(melt flow rate).

Soarnol ET3803 has both excellent barrier to gases as well as water resistance. This resin primarily used in coextruded film applications. Furthermore, it can also be used in coextruded sheet/thermoforming and shrink packaging.

[General Properties]

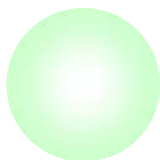
<i>Property</i>	<i>Unit</i>	<i>Value</i>
Ethylene Content	mol%	38
MFR ¹⁾ (@210°C, 2160g)	g/10min	3.2
Volatile Matter	%	< 0.3
Melting Point ²⁾	deg C	173
Crystallization Temperature ²⁾	deg C	152
Oxygen Permeability ³⁾	cc 20 μ m / m ² day atm	0.7
20deg C-65%RH	cc·mil/100inch ² ·day·atm	0.036
WVTR	g 30 μ m / m ² 24hrs	23-35
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]

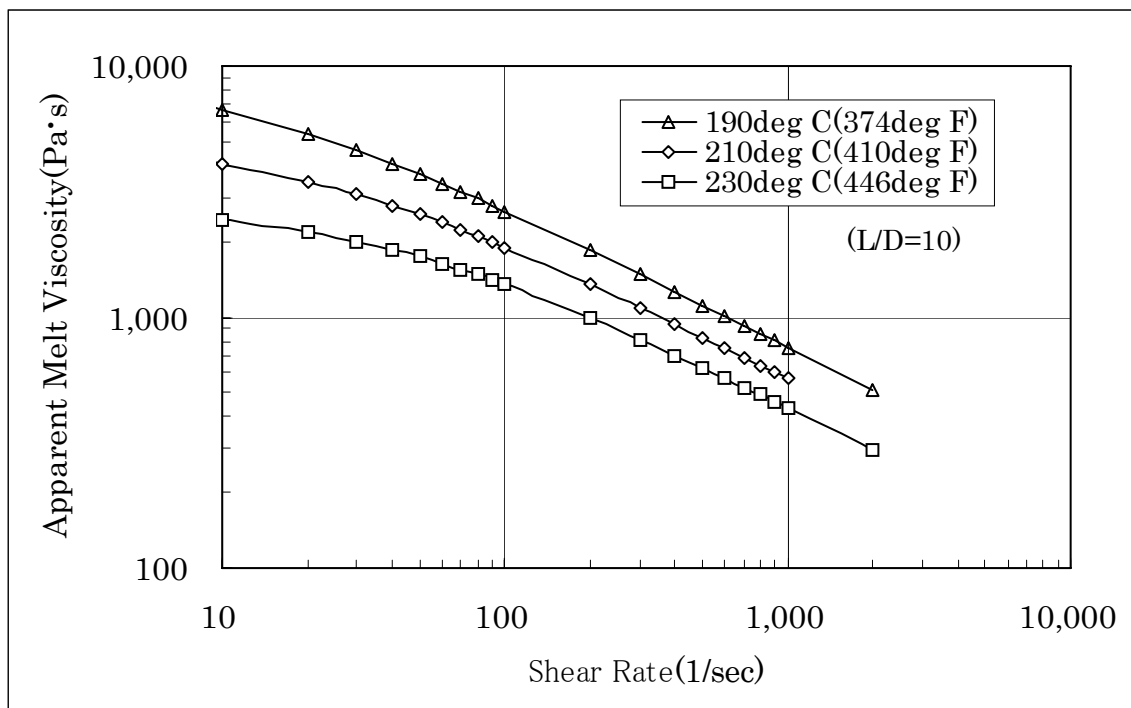


Fig.1 Melt Viscosity of Soarnol ET3803

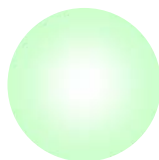
[Example of Processing]

- Extruder: 40 mm ϕ 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 ₁	C ₂	C ₃	C ₄	C ₅	Head	Die
170	190	210	220	220	220	190-220
(338)	(374)	(410)	(428)	(428)	(428)	(374-428)





[Hygienic Performance of Soarnol ET3803]

Soarnol ET3803 contains no heavy metals or other harmful substances.
Soarnol ET3803 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

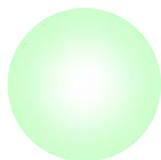
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