

# **Soarnol™ ET3803RB**

ETHYLENE VINYL ALCOHOL COPOLYMER (EVOH)

38 mol% Ethylene Content

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## Application

Soarnol™ ET3803RB is one of the standard grades of Soarnol™, its ethylene content is 38 mol% with a low MFR (melt flow rate).

Soarnol™ ET3803RB has excellent barrier to gases. This resin is primarily used in co-extruded film applications.

Furthermore, it can also be used in co-extruded sheet / thermoforming and shrink packaging.

## General Properties

Properties	Unit	Value
Ethylene Content	mol%	38
MFR <sup>1)</sup> (210 degree C, 2160g)	g/10min	4.0
Volatile Matter	%	≤0.30
Melting Point <sup>2)</sup>	degree C	173
Crystallization Temp. <sup>2)</sup>	degree C	152
Glass Transition Temp. <sup>2)</sup>	degree C	58
Density <sup>3)</sup> (23 degree C)	g/cm <sup>3</sup>	1.17
Oxygen Permeability <sup>4)</sup> (20 degree C x 65%RH)	cc.20μm / m <sup>2</sup> .day.atm cc.mil / 100inch <sup>2</sup> .day.atm	0.5 0.025

1): Measured with Melt Indexer

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

3): Measured with Micromeritics Gas Pycnometer

4): Measured with OXTRAN 2/22 (MOCON)

\*The above figures are representative values and are not guaranteed.

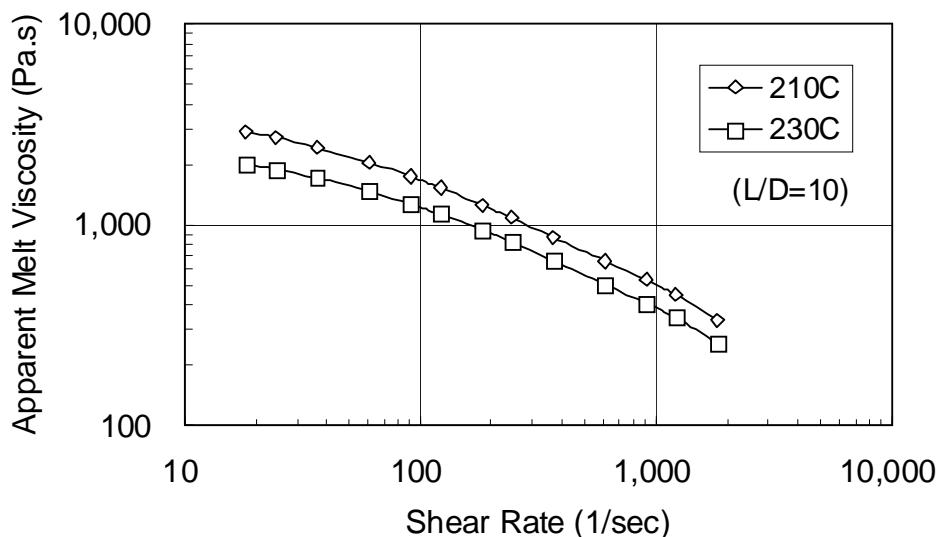
Melt Viscosity

Fig. 1 Melt Viscosity of Soarnol™ ET3803RB

Example of Processing

Extruder : 40 mmφ L/D = 28

Screw : full flight, constant pitch type, C.R. = 3.5

Screen pack : 90/90 mesh

## Processing Temperature (degree C)

C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	AD
170-200	185-210	200-230	200-230	200-230	200-230

Quality and Safety for Application of Soarnol™ ET3803RB

High quality Soarnol™ is produced by Okayama plant in Japan, Mitsubishi Chemical America Inc. in U.S.A. and Mitsubishi Chemical UK Ltd. in U.K.. All plants are certified to meet the requirement of ISO 9001.

Soarnol™ contains no heavy metals or other harmful substances. Soarnol™ meets the Food Sanitation Standards of various countries.

Please contact us to inquire about food product hygiene for the various Soarnol™ brands or for food hygiene conformity in other countries.

JAPAN : Ministry of Health and Welfare Announcement No.370(1959) and Its Latest Amendment No.196(2020)

U.S.A : US FDA 21, C.F.R. §177.1360

EU : Commission Regulation (EU)No. 10/2011 and its amendments

CHINA : GB9685-2016, GB4806.6-2016, GB4806.7-2023 (Enforced on September 6, 2024) and their amendments

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**MITSUBISHI CHEMICAL CORPORATION**

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