

Soarnol™ A4412HB

ETHYLENE VINYL ALCOHOL COPOLYMER

Modified Soarnol™ for the hot-water under floor heating pipe

Application

Soarnol™ A4412HB is a special grade of Soarnol™, its ethylene content is 44 mol% with a high MFR (melt flow rate).

Soarnol™ A4412HB has a better thermal durability, therefore it can be used as the oxygen barrier component of the under floor heating pipe.

General Properties

Properties	Unit	Value
Ethylene Content	mol%	44
MFR ¹⁾ (210 degree C, 2160g)	g/10min	12
Volatile Matter	%	≤0.30
Melting Point ²⁾	degree C	164
Crystallization Temp. ²⁾	degree C	144
Density ³⁾ (23 degree C)	g/cm ³	1.14
Oxygen Permeability ⁴⁾ (20 degree C x 65%RH)	cc.20μm / m ² .day.atm cc.mil / 100inch ² .day.atm	1.5 0.076

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 2/20 (MOCON)

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

Melt Viscosity

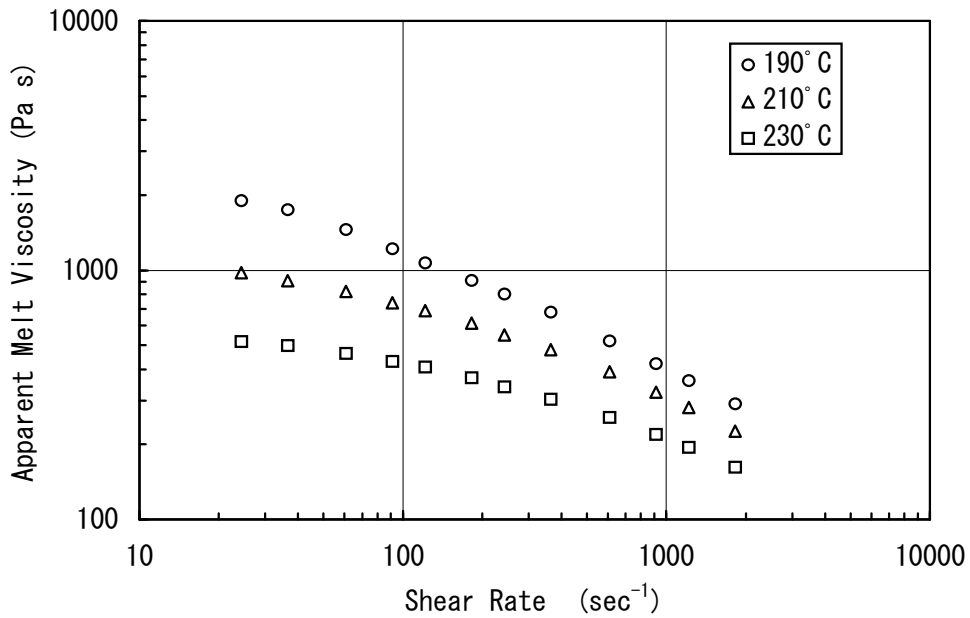


Fig. 1 Melt Viscosity of Soarnol™ A4412HB

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 ₁	C ₂	C ₃	C ₄	C ₅	AD
170-200	185-210	200-230	200-230	200-230	200-230

Thermal Durability

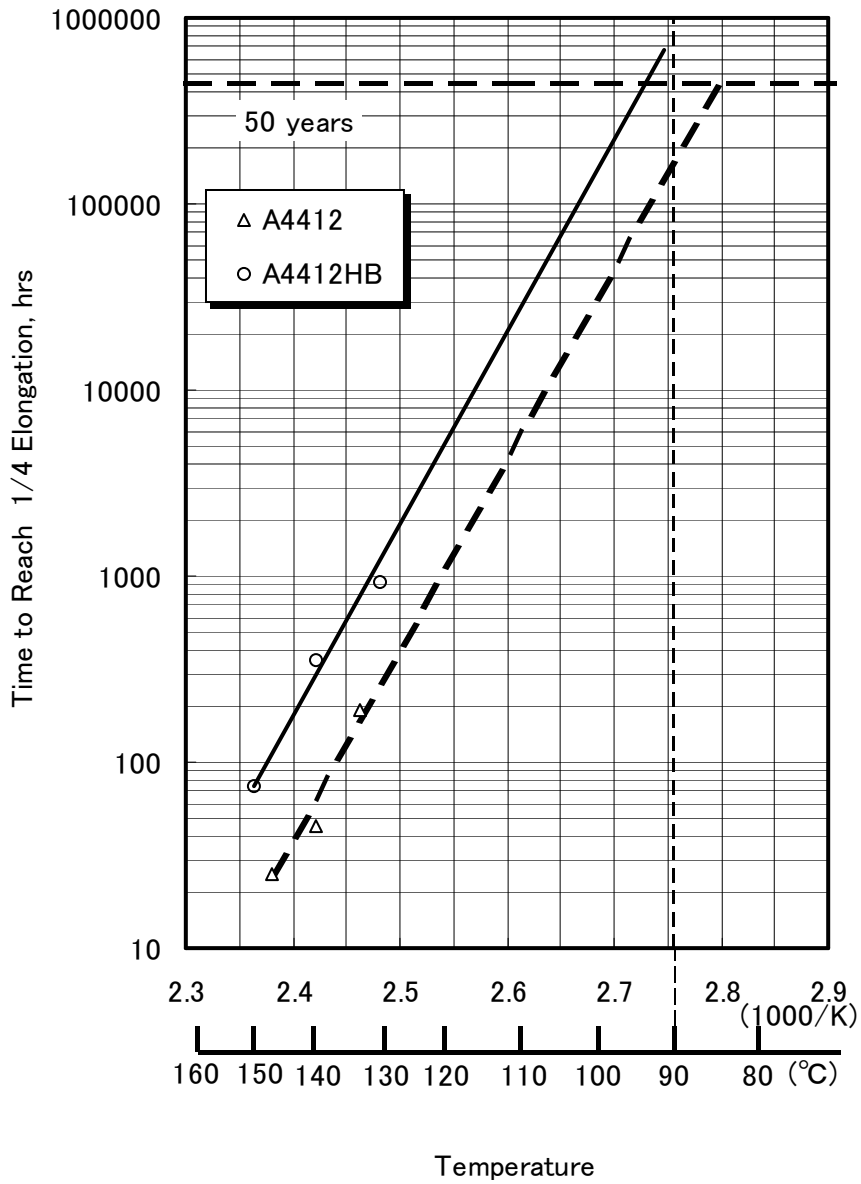


Fig. 2 Thermal Durability of Soarnol A4412HB

Quality and Safety for Application of Soarnol™ A4412HB

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.

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