

## Fuel Barrier Property of “Soarnol™”

Fuel barrier property of “Soarnol™” is shown in the following.

### (1) Test Method

#### 1) Sample

Multilayer pouch: Thickness (HDPE/Tie/EVOH/Tie/HDPE)=(80/10/20/10/80)  $\mu\text{m}$   
: Surface Area 200cm<sup>2</sup> for both sides(Dimensions 10cm\*10cm)  
EVOH : Soarnol 25mol%, 29mol%, 32mol%

#### 2) Fuel

E10=(Fuel C/EtOH)=(90/10) vol%  
Fuel C=(Toluene/ i -Octane)=50/50 vol%

#### 3) Measurement of Fuel Barrier Property

Hold under 40deg C, Dry Atmosphere  
Weigh the pouch after predetermined time

## (2)Result

### 1) E10 system

EVOH	Fuel Permeability (g 20μ/m <sup>2</sup> day)
Soarnol 25mol%	0.04
Soarnol 29mol%	0.20
Soarnol 32mol%	0.30

In case of E10 system consisting of ethanol, low ethylene content “Soarnol™” shows high fuel barrier property.

### 2) Fuel C system

EVOH	Fuel Permeability (g·20μm/m <sup>2</sup> ·day)
Soarnol 25mol%	0.05
Soarnol 29mol%	0.05
Soarnol 32mol%	0.05

In case of Fuel C system which doesn't contain alcohol, each “Soarnol™” shows high fuel barrier property.

Its barrier level is the best of all three fuel systems.