

## Attention to processing of “Soarnol™”

Attention must be paid before, during and after molding of “Soarnol™” because of its physical and chemical property due to molecular structure of “Soarnol™”.

### ● Package and moisture content of Soarnol.

Moisture content of Soarnol is controlled within 0.3% in the manufacturing process. Since Soarnol is packed in a moisture-proof bag or container, pre-drying is unnecessary. Unnecessary pre-drying should be avoided, because careless pre-drying may cause small gel troubles in the film making process.

As Soarnol absorbs moisture from the atmosphere, careful storage is important after opening a container. (please handle Soarnol as carefully as nylon.) Increase moisture content of Soarnol may cause bubbling troubles in processing.

### ● General suggestion on processing

#### (1) Pre-Purge

In case of change-over from LDPE to “Soarnol™”, you can use “Soarnol™” directly.

On the other hand, in case of change-over from HDPE, PP or L-LDPE to “Soarnol™”, it’s preferable to have change-over with LDPE firstly, and you can use “Soarnol™” after that.

Especially, when you use Nylon or PVC before processing of “Soarnol™”, you can have change-over with “Soarnol™” if the residual resins inside a cylinder or a die are removed perfectly by purging these resins with LDPE.

#### (2) Resin Temperature

Please pay attention to set temperature of cylinder head or die and to screw speed.

### (3) Residence Time

Approximately 30 minutes are allowable residence time. In case of long time shutoff of processing, it's recommendable to have low screw speed operation of "Soarnol™"s extruder or to have change-over with LDPE.

### (4) After-Purge

After-purging with LDPE (MFR=nealy 1) is effective even within short time.

### (5) Attention to purging resin

PP or HDPE is not good for pre-purging or after-purging resin.

Some of these resins causes gel problems after contacting with EVOH.

Purging with adhesive resin sometimes causes gel problems.

General conditions of purging are shown in the following.

Real Condition of Pre-Purge or after-Purge with "Soarnol™"

Resin before change →	Change-over resin →	Resin after change
LDPE, HDPE and PP	LDPE (MI = 5-8)	"Soarnol™"
HDPE and PP (Lower MFI)	LDPE (MI=less than 2)    LDPE (MI=5-8)	"Soarnol™"
"Soarnol™"	LDPE (MI = 0.5 - 2)	LDPE, HDPE and PP
Polyamide	LDPE (MI = 0.5 - 2) <sup>1)</sup>	"Soarnol™"
"Soarnol™"	LDPE (MI = 0.5 - 2) <sup>2)</sup>	Polyamide
Adhesive resin <sup>3)</sup>	LDPE (MI = 0.5 - 2)	"Soarnol™"
"Soarnol™"	LDPE (MI = 0.5 - 2)	Adhesive resin <sup>3)</sup>

1) With temperature down from polyamide extrusion temperature to less than 230deg C.

2) After enough purge of "Soarnol™" with LDPE at 200 - 230 deg C, temperature should be rised to polyamide extrusion temperature.

3) Polyolefine base adhesive resin.

Notes: No purging is necessary for changing from one "Soarnol™" quality to another. "Soarnol™" extrusion processing should be shut down after enough after-purging of "Soarnol™" by LDPE (MI=0.5-2).