

General properties

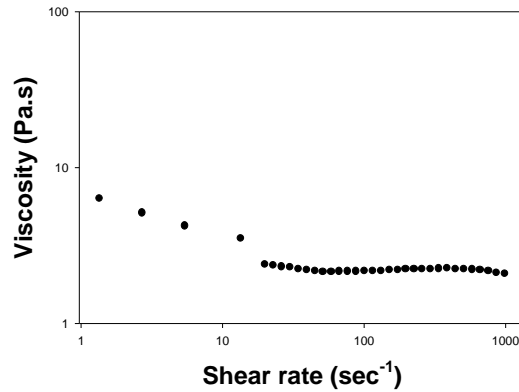
EL-103 is a low molecular weight emulsion type PVC homopolymer.

It produces plastisol exhibiting low viscosity at low shear rate and newtonian flow at high shear rates with low-medium plasticizer level (50-70 phr).

Plastisol made from this polymer exhibit the following properties.

- ▶ good gelation rate
- ▶ good whiteness for wallpaper and cushioned flooring
- ▶ good rheological property
- ▶ high clarity and high gloss surface finish
- ▶ good thermal/light stability with a wide range of stabilizers especially liquid Ca/Zn or Tin type
- ▶ good foaming properties with a wide range of stabilizers especially liquid K/Zn or Na/Zn or Ca/Zn type
- ▶ low viscosity aging rate-long shelf life with little tendency to sediment

Rheological properties



1 hours aged at 25 °C

Formulation
PVC 100
DINP 60 phr

Polymer properties

<i>Property</i>	<i>Unit</i>	<i>Typical Value</i>	<i>Test Method</i>
Polymerization degree	-	900 ± 50	JIS K 6720-2
K-value	-	63	DIN 53726
Apparent density	g/cc	0.28 ± 0.07	ASTM D 1895
Volatile content	%	Max. 0.30	ASTM D 3030
Particle size	%	100	100 mesh pass
BF viscosity(20rpm)	Pa.s	6.3	ASTM D
Viscosity at 500 sec ⁻¹	Pa.s	3.8	1824

BF viscosity test conditions:

PVC 100
DINP 60 phr
1 hours aged at 25 °C

Applications

EL-103 produces plastisols which are ideal for the manufacture of foamed wall paper and foamed flooring by spread coating.

EL-103 plastisols are also ideal for the spread coating of chemically blown foams with a fine cell structure produced at low-medium oven temperatures.

EL-103 can be applied by transfer spread coating process or rotary screen coating process.

The main applications are

- ▶ chemically foamed wallpaper produced by comma or gravure coating process
- ▶ chemically foamed wallpaper produced by rotary screen coating process
- ▶ low-medium plasticizer content chemically blown foam coating for wallpaper and cushioned flooring using the 'Congoleum' process where a fine cell structure with excellent inhibition and contour sharpness is required.
- ▶ foaming material with a fine cell structure at low-medium oven temperature

Guide formulations

Wall Covering	
EL-103	100 phr
DINP	65
plasticizer for flame retardant (Chlorinated paraffine, TCP)	as required
Blowing agent(ADCA)	3
Antimony oxide	10~20
Filler(calcium carbonate)	30~50
TiO ₂	10
Kicker(ZnO)	0.5~1
Stabilizer	3
Diluent	as required

Floor Covering(foamed layer)	
EL-103	70~80 phr
Blend resin(HB-65)	20~30
DINP	40~60
2nd plasticizer(TXIB)	5~10
Stabilizer	1~2
Blowing agent(ADCA)	2~3
Filler(calcium carbonate)	10~30
TiO ₂	3~6
Kicker(ZnO)	1
Diluent	as required