

General properties

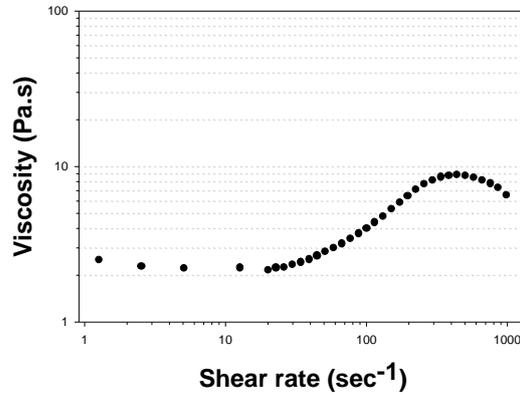
KL-10 is a low molecular weight micro-suspension type PVC homopolymer.

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

Plastisol made from this polymer exhibit the following properties.

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

Rheological properties



1 hours aged at 25 °C

Formulation
PVC 100
DOP 60 phr

Polymer properties

<i>Property</i>	<i>Unit</i>	<i>Typical Value</i>	<i>Test Method</i>
Polymerization degree	-	1000 ± 100	JIS 6721
K-value	-	63.3~67.6	JIS 6721
Apparent density	g/cc	0.20~0.40	JIS 6721
Volatile content	%	Max. 0.35	JIS 6721
Particle size	%	100	100 mesh pass
BF viscosity(20rpm)	Pa.s	3.0	ASTM D
Viscosity at 500 sec ⁻¹	Pa.s	6.6	1824

BF viscosity test conditions:

PVC 100

DOP 60 phr

1 hours aged at 25 °C

Applications

KL-10 produces plastisols which are ideal for the manufacture of foamed(or compact) wall paper by spread coating.

KL-10 plastisols are also ideal for the spread coating of chemically blown foams with a fine cell structure produced at low-medium oven temperatures.

KL-10 can be applied by reverse roll coating or comma coating or rotary screen coating process.

The main applications are

- ▶ chemically foamed(or semi-foamed) wall-paper produced by reverse roll coating or comma coating or 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.
- ▶ spread coatings of compact thin coatings on high speed reverse roll and rotary screen and comma coaters
- ▶ foaming material with a fine cell structure at low-medium oven temperature

Guide formulations

Wall Paper	
KL-10	100 phr
DOP	60~70
Blowing agent(ADCA)	0~3
Filler(calcium carbonate)	40~80
TiO ₂	10
Stabilizer	3
Diluent	as required

Floor Covering(foamed layer)	
KL-10	70~80 phr
Blend resin(KBM-10)	20~30
DOP	40~60
2nd plasticizer(TXIB)	5~10
Stabilizer	1~2
Blowing agent(ADCA)	2~3
Filler(calcium carbonate)	30~50
TiO ₂	3~6
Kicker(ZnO)	1
Diluent	as required