

General properties

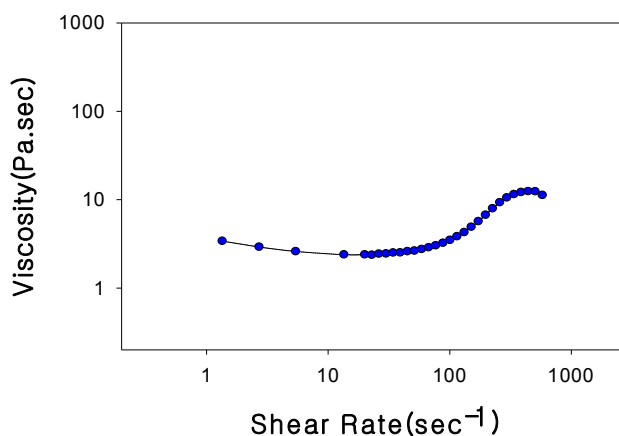
KH-10 is a high molecular weight micro-suspension type PVC homopolymer.

It produces plastisol exhibiting low viscosity at low shear rate and slight dilatancy at high shear rates with low-medium plasticizer level (40~60 phr).

Plastisol made from this polymer exhibit the following properties.

- ▶ high clarity and semi gloss surface finish
- ▶ excellent mechanical properties
- ▶ good thermal/light stability with a wide range of standard stabilizers
- ▶ low viscosity and low viscosity aging rate long shelf life with little tendency to sediment
- ▶ low water absorption
- ▶ high electrical resistance

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	-	1700 ± 100	JIS K 6720-2
K-value	-	76	DIN 53726
Apparent density	g/cc	0.23 ± 0.04	ASTM D1895
Volatile content	%	Max. 0.30	ASTM D3030
Particle size	%	100	100 mesh pass
BF viscosity(20rpm)	Pa.s	2	ASTM D
Viscosity at 500 sec ⁻¹	Pa.s	12	1824

BF viscosity test conditions:

PVC 100

DOP 60 phr

1 hours aged at 25 °C

Applications

KH-10 produces plastisols which are well suited for the solid spread coating, especially clear coats with low plasticizer content and where high mechanical properties are required.

Due to the low viscosity, **KH-10** plastisols are also ideal for all types of coatings and for rotational molding, dip coating and the casting process.

KH-10 plastisols can be applied by direct or transfer spread coating process, including drum gelling process.

The main applications are

- ▶ low plasticizer content spread coatings, especially high clarity top coats for floor covering, wall coverings, and coated fabric application requiring high mechanical properties.
- ▶ low-medium plasticizer content rotational moldings and dip coating with an excellent surface finish and high mechanical properties.
- ▶ slush molding process which produces rain boots, shoes, car arm rests and parts for the interiors of motor vehicles.

Guide formulations

Top layer of Floor Covering	
KH-10	60~70 phr
Blend Resin	30~40
DOP	40~60
2nd plasticizer	5~10
Stabilizer	3

Doll (Rotational Molding)	
KH-10	100 phr
DINP	40~70
Epoxyed plasticizer	3
Filler(calcium carbonate)	0~30
Diluent	as required
Pigment	as required

Slush Molding (Semi rigid product)	
KH-10(KL-10)	70 phr
Blend resin	30
DOP(DINP)	30~40
2nd plasticizer(TXIB)	5
Stabilizer(Ca-Zn)	3
Pigment	as required