

General properties

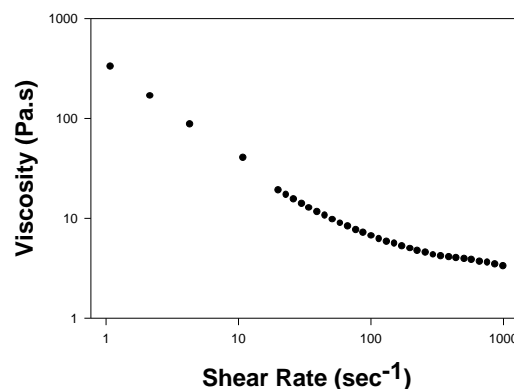
EM3090 is a fine particle size, medium molecular weight emulsion type PVC homopolymer.

It produces plastisol exhibiting high viscosity and yield value at low shear rate and pseudo-plastic flow at high shear rates with medium-high plasticizer level (70-100 phr).

Plastisol made from this polymer exhibit the following properties.

- ▶ good foaming properties with a wide range of stabilizers especially liquid K/Zn or Na/Zn type
- ▶ low viscosity aging rate, long shelf life with little tendency to sediment
- ▶ good thermal stability with a wide range of standard stabilizers.
- ▶ fast gelation rate
- ▶ semi gloss surface finish

Rheological properties



1 hours aged at 25 °C

Formulation
PVC 100
DINP 100 phr

Polymer properties

<i>Property</i>	<i>Unit</i>	<i>Typical Value</i>	<i>Test Method</i>
Polymerization degree	-	1150±100	JIS 6721
K-value	-	66.7~70.6	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	32	ASTM D
Viscosity at 500 sec ⁻¹	Pa.s	4	1824

BF viscosity test conditions:

PVC 100

DINP 100 phr

1 hours aged at 25 °C

Applications

EM3090 produces plastisols which are ideal for the spread coating of chemically blown foams, particularly high expansion-high thickness foams with a very fine closed cell structure at a wide range of oven conditions at medium-high plasticizer levels. It also produces high yield, high viscosity compact coating plastisols without the need to add thickening agents. **EM3090** can be applied by rotary screen or comma or transfer spread coating processes, or spraying.

The main applications are

- ▶ chemically blown foams of high thickness, low density and very fine closed cell structure
- ▶ medium-high plasticizer content chemical foam coats for synthetic leather cloth especially in blends with EM2070
- ▶ chemically foamed wall-coverings produced by rotary screen or comma or transfer spread coating processes especially in blends with EM2070
- ▶ direct or transfer coated compact coats onto wide mesh or net type fabrics especially where high adhesive strength is required
- ▶ high yield plastisols for automobile sealant applications applied by airless spray

Guide formulations

Wall Covering	
EM2070	80 ~ 50 phr
EM3090	20 ~ 50
DINP	60 ~ 70
TXIB	0 ~ 10
Blowing agent(ADCA)	2 ~ 3
Filler(calcium carbonate)	30 ~ 70
TiO ₂	10
Kicker(ZnO)	0.5 ~ 1
Stabilizer(K/Zn or Ca/Zn)	2 ~ 3
Diluent	as required

Synthetic leather cloth	
EM2070	80 ~ 50 phr
EM3090	20 ~ 50
DINP	60 ~ 90
Epoxy plasticizer	10
Blowing agent(ADCA)	3
Filler(calcium carbonate)	30 ~ 50
Stabilizer(Ca/Zn)	2 ~ 3
Pigment	as required
Diluent	as required