



PVC ADDITIVES

INDOFIL K-120 PF

Processing Aid for Opaque PVC Products

1 INTRODUCTION

INDOFIL K-120 PF is a highly dispersible, fine powder that dramatically improves the processing of rigid and plasticized polyvinyl chloride (PVC). PVC containing INDOFIL K-120 PF processing aid, fuses rapidly, flows smoothly, has excellent hot strength and is readily formed. Additionally the excellent dispersibility of INDOFIL K-120 PF Processing aid eliminates the gels & fish eyes that mar the surface of PVC products.

It is recommended to use only for opaque PVC products such as pipes & fittings, PVC profiles, bottles etc.

Benefits

The benefits provided to use only for opaque PVC products such as pipes & fittings, PVC profiles, bottles etc.

- Decreased fusion time
- Highly homogenous melt
- Opaque applications
- Smooth processing
- Reduced plate out even with higher filter level
- Increased output rates

2. PHYSICAL CHARACTERISTICS

TYPICAL PHYSICAL PROPERTIES (These do not constitute specifications)

Appearance	White, fine free-flowing Powder with uniform Particle size
Bulk Density ,g/cc	0.40 to 0.44
Specific Gravity, @ 25°C	1.16
Molecular Weight	Low to Medium
Volatiles (%)	Max 0.5
Sieve Test Retention time	
60 mesh	Max 2
100 mesh	Max 5
200 mesh	Max 40
Clarity in 10% toluene Solution	Hazy
10% Toluene Solution Viscosity (cps)	100-800

3 PERFORMANCE CHARACTERISTICS

3.1 Processing & Rheological Properties

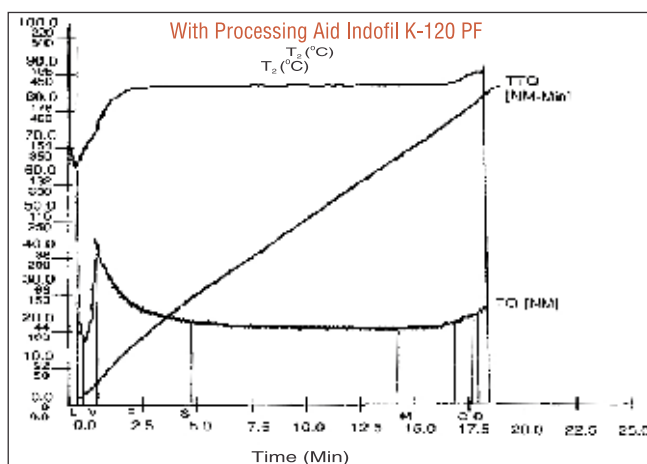
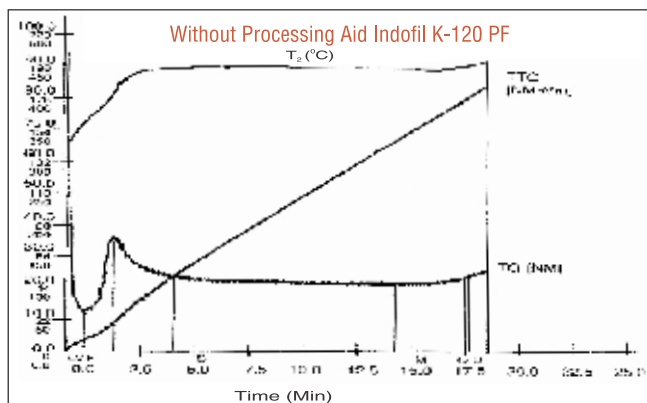
The Performance Characteristics of INDOFIL K-120 PF is determined on Haake Rheocord 90 for different grades of PVC resin. Table A shows rheological properties which are graphically represented by Graph A.

TABLE A
A. PVC-K-67 - Temp.180°C, RPM-60, Weight 60 gms.

Formulation	Parts	
PVC(K-67)	100.00	
Octyl tin stabilizer	2.25	
Glycerol monostearate	0.70	
OP Wax	0.30	
Processing Aid	0 to 2 phR	

Properties	Control(Without Processing Aid)	INDOFIL K-120 PF
		2 phR
Fusion time (secs.)	115.00	56.00
Fusion Temp. (°C)	169.00	157.00
Gelation time (Min)	5.50	3.50
Gelation Temp. (°C)	187.0	182.00
Equilibrium torque (NM)	20.60	20.40
Thermal Stability (Min)	16.25	15.75

GRAPH : A



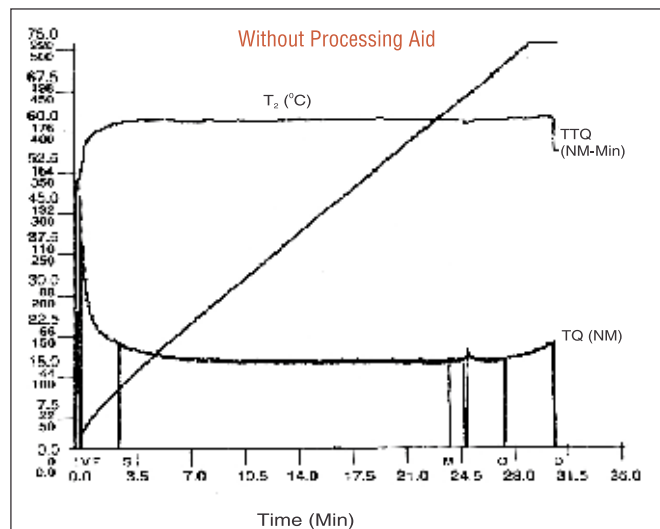
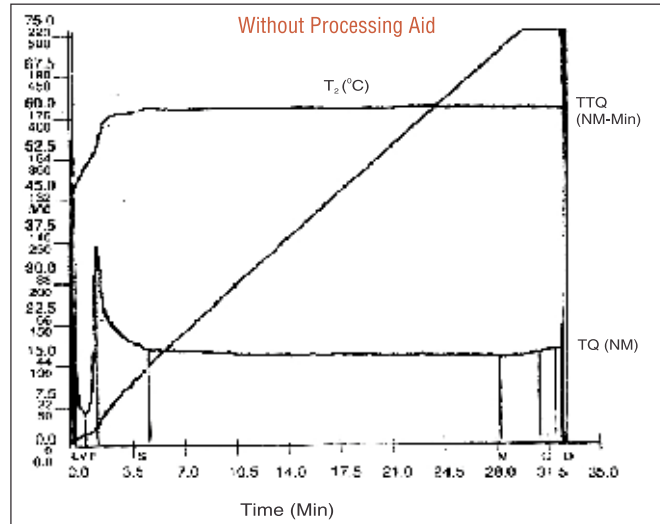


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Table B Shows rheological properties using K-57 PVC resin which are represented by Graph B

Table B		
PVC K-57-Temp.180°C, RPM-60, weight 60 gms.		
Formulation	Parts	
PVC(K-57)	100.00	
Octyl tin stabilizer	2.25	
Glycerol monostearate	0.70	
OP Wax	0.30	
Processing Aid	0 to 2 phR	
Properties	Control (Without Processing Aid)	INDOFIL K-120 PF 2 phrR
Fusion time (secs.)	23.00	12.00
Fusion Temp. (OC)	158.00	154.00
Gelation time (Min)	4.00	2.75
Gelation Temp. (OC)	191.00	189.00
Equilibrium torque (NM)	10.50	10.60
Thermal Stability (Min)	15.00	14.50

GRAPH : A



4 APPLICATIONS

INDOFIL K-120PF processing Aid can be used for a wide range of PVC products including:

- Injection molded parts
- Pipes & conduits
- Extruded profiles & bottles

INDOFIL K-120ND & INDOFIL K-120PF can be used interchangeably. However, INDOFIL K-120ND is preferred when higher melt strength and outstanding weatherable resistance are required. Indofil K-120PF is preferred when fast gelation with higher filler loading and low cost are of prime importance. Indofil K-120PF makes even higher molecular weight PVC (higher K value) easily processable.

Recommended Dosage 1 to 3 PHR

