

www.omegaplasto.com



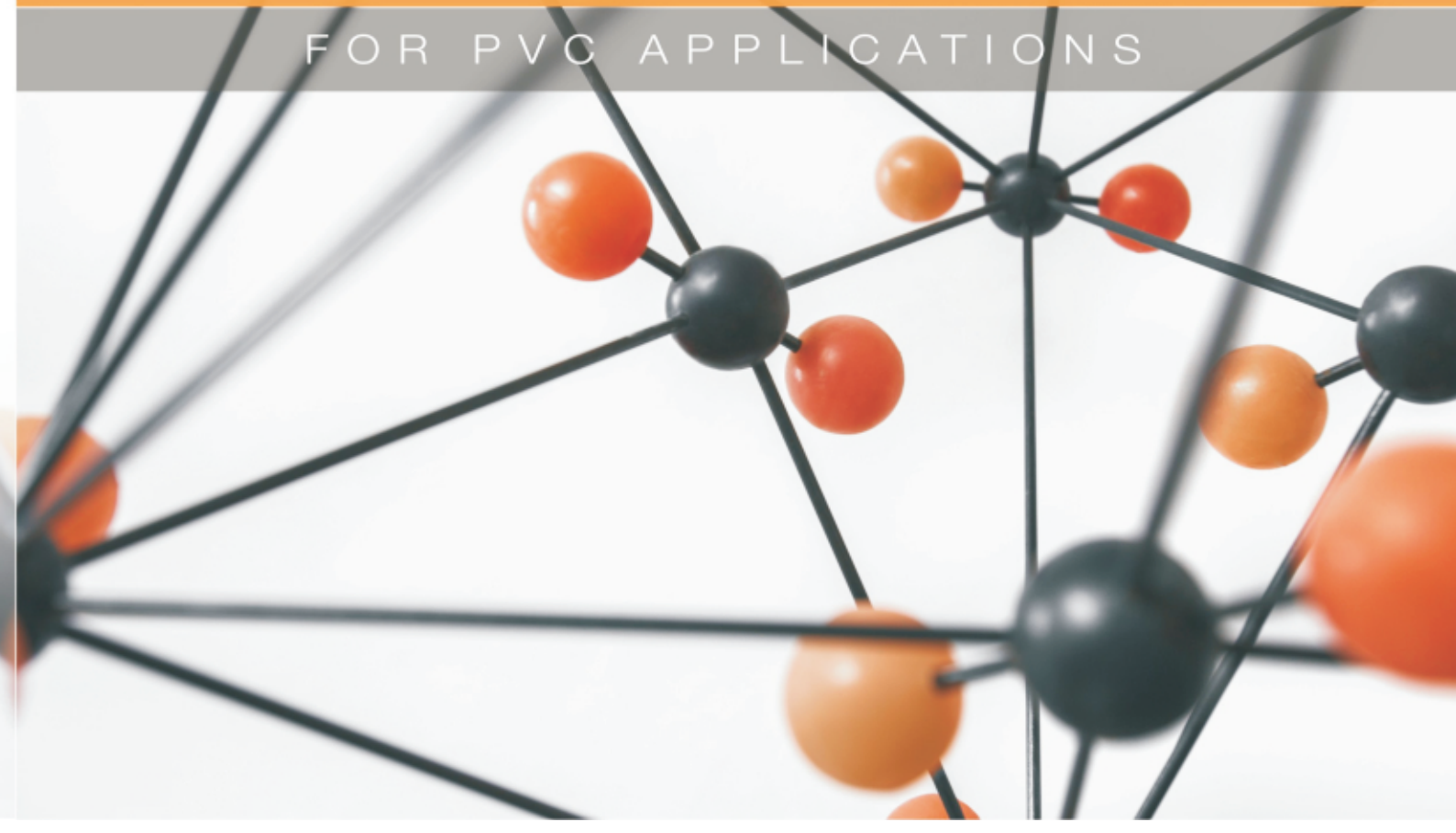
# Polycom - P

A COST - EFFECTIVE PROCESSING AID  
TO ENHANCE THE QUALITY

a <small> addition will make a <BIG> change !

## PROCESSING AID

FOR PVC APPLICATIONS



## Company Profile

Omega Plasto Compounds Pvt. Ltd., based in India has more than a decade of specialized experience in manufacturing of wide range of Processing Aid and Modifiers.

Company has highly experienced and prestigious R & D Department which has developed a wide range of Processing Aids and Modifiers to suit the latest requirements of Plastic Industry.

POLYCOM-P Processing Aid exclusively developed by our organisation, has created a revolution in PVC Industry, both in Domestic and International market. We have our presence in more than 75 countries.

POLYCOM - P, not only improves the quality of PVC Products but is also machine friendly and helps in reducing production cost.

Omega has an installed capacity of around 30,000 MT/Annum and an additional capacity of 30,000 MT/Annum is under expansion is in the final stage of commissioning .

The Company is capable of executing even larger quantities of material in scheduled time period, as and when required by our reputed customers in domestic and International market.

The Company's After-Sales Services, which involve thorough Technical Communications and Frequent visits by our representatives, are appreciated Internationally in the entire Plastic Industry.

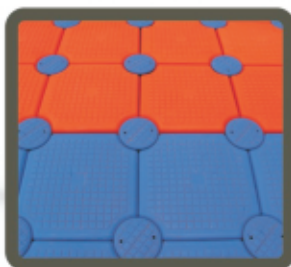
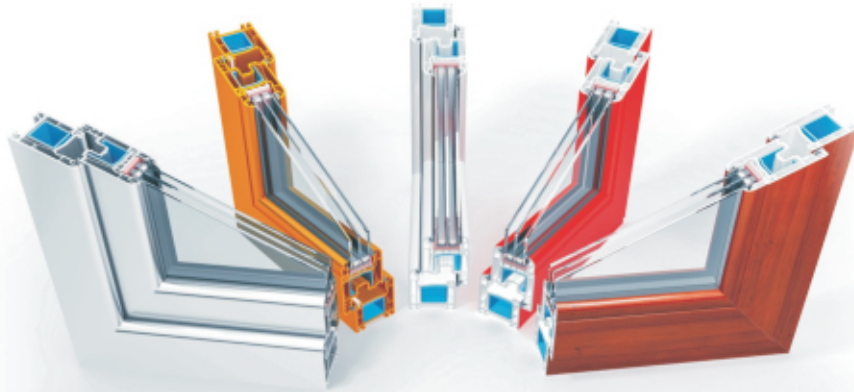




# Polycom - P

PROCESSING AID FOR PVC APPLICATIONS

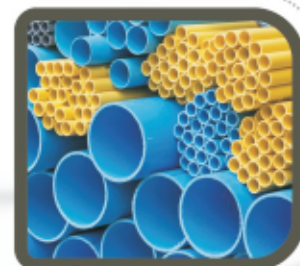
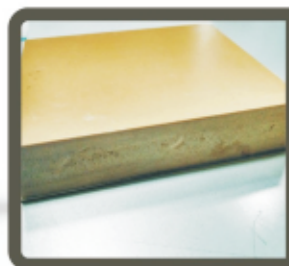
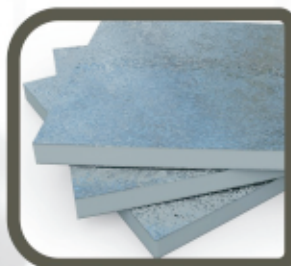
The melting temperature of Polycom-P is lower than PVC resins and POLYCOM-P accelerates fusion rate which results in lower Gelation time or the homogenization earlier than PVC during the processing. Also POLYCOM-P is compatible with PVC resin and it has the characteristic to make the bond PVC resin and other materials to increase the internal friction and sheering temperature, avoid the slippery of material so that the dispersion, homogenization and temperature is perfect, eventually it will benefits the earlier and uniform Gelation.





## Advantages of using Polycom – P

- Accelerates fusion rate & increase productivity.
- Reduces Gelation time without fusion torque.
- Improves homogeneity & dispersion of the entire matrix during the process.
- Dosage of Impact modifiers like ACR / CPE can be reduced with addition of POLYCOM-P.
- Gelation time can be reduced, even with higher dosage of ACR/CPE Impact modifiers.
- Improved surface finish.
- Improves the flow lines which occur due to more dosage of Calcium Carbonate & Recycle.
- Avoids carbon formation / deposition on die during processing.
- Eliminates Agglomeration, so option to increase the dosage of calcium.
- Increases Elongation and Impact strength in all PVC application.
- POLYCOM-P is compatible with Upvc, Cpvc, Rigid PVC & Soft PVC.
- Replaces expensive Acrylic processing aid



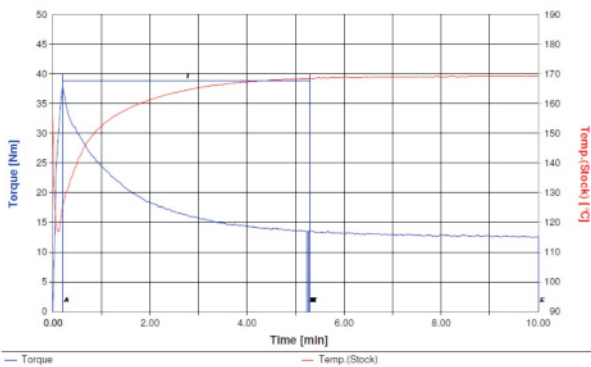
## POLYCOM-P REDUCES GELATION TIME, MAINTAINING TORQUE

### BRABENDER® Plastogram

PLASTI-CORDER and Mixer Measuring Head  
Fusion Behaviour / Version 4.9.4

#### Test Conditions

Order: OMEGA PLASTO COMPOUND      Speed : 60 1/min  
Mixer Temp. : 160 °C                      Date : 11-07-2017 15:47  
Start Temp. : 155 °C                      Drive Unit : Plastograph EC  
Plus Meas. Range : 50 Nm                Mixer : W 50 EHT - 3 Zones  
Damping : 3                                  Loading Chute : Manual + 5  
kg Test Time : 10.00 min                Sample : SAMPLE- 169  
Sample Mass : 60.0 g                      Additive :



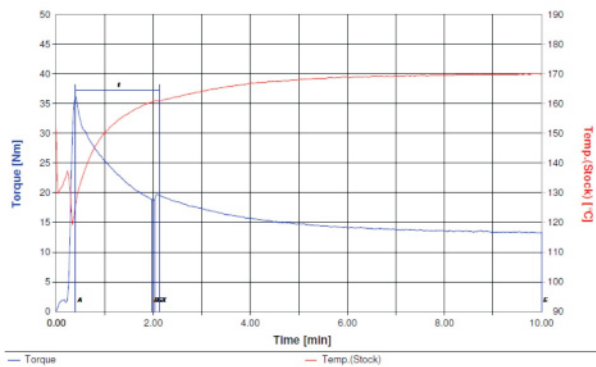
GRAPH 1: STANDARD FORMULATION WITH PA 40-1 phr

### BRABENDER® Plastogram

PLASTI-CORDER and Mixer Measuring Head  
Fusion Behaviour / Version 4.9.4

#### Test Conditions

Order : OMEGA PLASTO COMPOUND      Speed : 60 1/min  
Mixer Temp. : 160 °C                      Date : 12-07-2017 13:18  
Start Temp. : 152 °C                      Drive Unit : Plastograph EC  
Plus Meas. Range : 50 Nm                Mixer : W 50 EHT - 3 Zones  
Damping : 3                                  Loading Chute : Manual + 5 kg  
Test Time : 10.00 min                Sample : SAMPLE- 173  
Sample Mass : 60.5 g                      Additive :



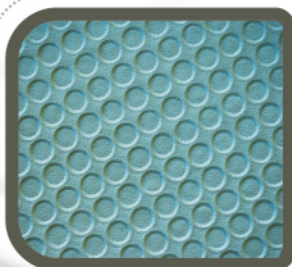
GRAPH 2: STANDARD FORMULATION WITH POLYCOM P 0.85 phr

### TEST RESULTS FROM BRABENDER:

S.R.No	FORMULATION			POLYCOM - P (in gms)	POLYCOM PHR	FUSION TIME Minute	GELATION SPEED Nm/Min
	PREMIXED MATERIAL (in gms)	PHA 40 PHR	TEMPERATURE				
STANDARD	60	1	160	0	0	5.1	2.4
TRIAL 1	60	0	160	0.50	0.85	1.73	26.2

\* Standard: Formulation with Processing Aid PA40 dosage 1 phr Gelation Time is 5.1 minutes.

\* Trial 1: Formulation with replacing Processing Aid with Polycom-P 0.85 phr Gelation Time is 1.73 minutes & increases Gelation Speed compared to Standard.



## DOSAGE RECOMMENDATIONS OF POLYCOM-P IN VARIOUS PVC APPLICATIONS

APPLICATIONS	PVC INJECTION MOULDING	PVC PIPE	PVC PROFILES	PVC PANELS	PVC SHEETS / FILM	WPC	PVC FOAM BOARDS	PVC FOAM PIPES
POLYCOM P DOSAGES IN PHR	0.75 - 2.0	0.5 - 1.5	1.0 - 2.0	1.0 - 2.0	1.0 - 2.5	2.0 - 5.0	1.0 - 3.0	1.0 - 3.0

### POLYCOM-P CUSTOMER TRIAL REPORT FOR PVC PROFILES

Product: PVC Profile

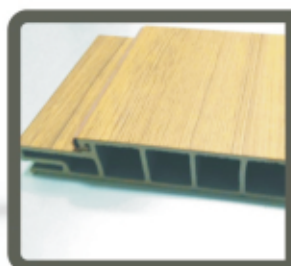


Without POLYCOM-P



With POLYCOM-P

Product	PVC Profile									
	PVC	Stabiliser	Impact Modifier	TiO <sub>2</sub>	PE Wax	Colour	Calcium	Processing Aid	Polycom P	
Formulation	Regular 1st Layer	100 kg	4 kg	5 kg	4 kg	0.5 kg	0.5 kg	10 kg	2 kg	0
	Trial 1	100 kg	4 kg	4 kg	4 kg	0.5 kg	0.5 kg	10 kg	0	1.5 kg
	Trial 2	100 kg	4 kg	3.5 kg	4 kg	0.5 kg	0.5 kg	10 kg	0	1.5 kg
	Trial 3	100 kg	4 kg	3 kg	4 kg	0.5 kg	0.5 kg	12 kg		2 kg
	OVEN 1					OVEN 2				
Temperature	Regular	180	175	175	170					
	Trial 1	180	175	175	170					
Trial Results	<ol style="list-style-type: none"> <li>Trial1 with POLYCOM-P 1.5Kg gives better shinning, strength and finished surface.</li> <li>Trial 2 reduce the dosage of Impact modifier and still get better properties compared to standard.</li> <li>Trial 3 customer wanted to try with higher calcium dosage and with Polycom-P 2 Kg got improved properties in the final product with reduced cost acceptable.</li> <li>In trial1 &amp;2 there were no drop of properties in the profile.</li> <li>Saved cost as reduced the dosage of Impact modifier and still get better properties.</li> <li>Replaced Processing Aid with Polycom P</li> </ol>									







Without POLYCOM-P



With POLYCOM-P

### POLYCOM-P CUSTOMER TRIAL REPORT FOR PVC COLUMN PIPES

Product: PVC COLUMN PIPES

Formulation	Particular	PVC	CaCO <sub>3</sub>	Stabiliser	Steric Acid	WAX	Processing Aid	Polycom P
	Regular	100	8	2.5	0.85	1	2	NIL
	Trial 1	100	8	2.5	0.85	1	-	1
<b>BARREL</b>							<b>Adapter</b>	<b>Die</b>
Temperature parameters	<b>Regular</b>	195	195	195	155	160	189	202
	<b>Trial 1</b>	195	195	195	155	160	189	202
Trial Results	<ol style="list-style-type: none"> <li>1. Replaced PROCESSING AID by POLYCOM-P</li> <li>2. Better Gloss, shining and higher colour intensity observed .</li> <li>3. Color intensity increased so reduced color master batch</li> <li>4. Gelation time reduced, torque maintained and increased productivity</li> <li>5. Standard impact strength 4.5 Kg , in 1st trial it pass no single crack found</li> <li>6. 2nd trial impact test did with 6 Kg, no single crack found</li> <li>7. Lower gelation time, so increases line speed, so higher output of the plant.</li> </ol>							

### POLYCOM-P CUSTOMER TRIAL REPORT FOR PVC FITTINGS

Product: PVC Fitting

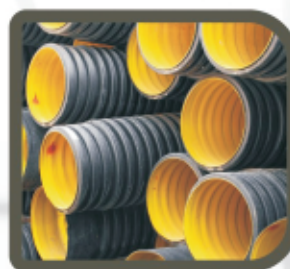
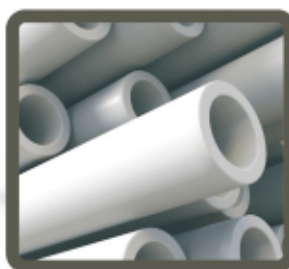


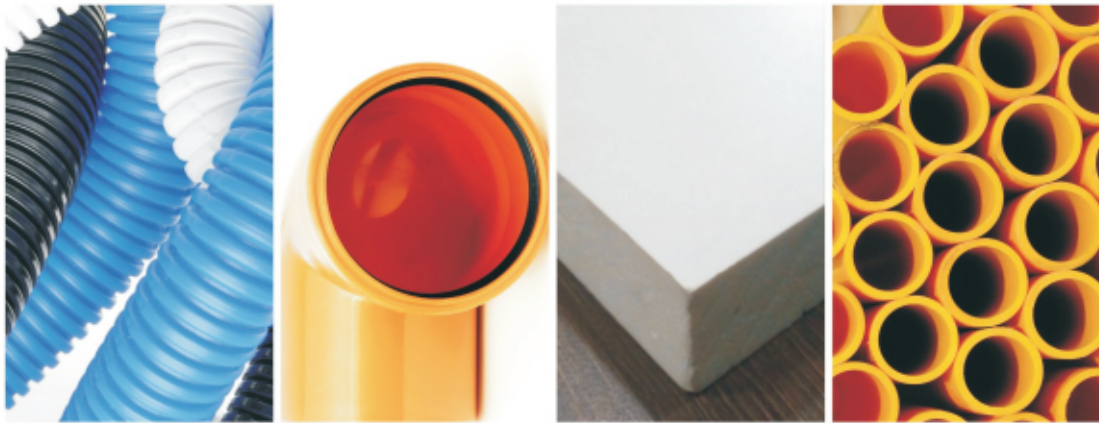
Without POLYCOM-P



With POLYCOM-P

Formulation	Particular	PVC	Stabiliser	Impact Modifier	Tio2	Processing Aid	Polycom P
	Regular	100 Kg	4 Kg	1.5 Kg	4 Kg	1.5 Kg	NIL
	Trial 1	100 Kg	4 Kg	1.5 Kg	4 Kg	NIL	1 Kg
	Trial 2	100 Kg	4 Kg	1.5 Kg	4 Kg	NIL	0.9 Kg
<b>BARREL</b>							
Temperature parameters	Regular	Z1	Z2	Z3	Z4		
	Trial 1	190	183	180	168		
Trial Results	<ol style="list-style-type: none"> <li>1. Replace Processing Aid with POLYCOM-P, no changes in the processing</li> <li>2. In Trial 2 reduce dosage of Polycom-P to 0.9, still better results</li> <li>3. Doing 3 quality test as below (1) Heat detention at 150 degree celcius, (2) Pressure test 67 barr , (3) Vicat softening test</li> <li>4. With POLYCOM-P all 3 quality test passed (1) Heat detention at 150 degree celcius, (2) Pressure test 67 barr , (3) Vicat softening test</li> <li>5. Gelation Time reduced, torque maintained</li> </ol>						





#### Applications

- PVC Pipes   ■ PVC Fittings   ■ PVC Profiles   ■ PVC Panels   ■ PVC Sheets
- PVC Foam Boards   ■ PVC Films   ■ PVC Carpets   ■ PVC Tiles   ■ PVC Membranes

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