Product Name		PROCESS FLOW CHART ตั้นฉา				
Filler Masterbatch						
Step	Graphical Symbol	Process Name	Equipment	Key Product & Key Control  Characteristics	Corrective Action	
		Start				
1		Raw Material Received	Scales	<ul> <li>Code No., Quantity</li> <li>Weighting ± 1 % / Container</li> </ul>	Return Supplier / Record Incoming Material (WH-F-002)	
2		Incoming Inspection	Two Roll Mill Spectrophotometer	• Mixing RM Temperature 120-300 °C • Delta E (Color Shade) 0.5-3.00	Report To Warehouse	
3		Material Preparation	Scales	<ul> <li>Weighting ± 0.5 g./ 7.5 kg.</li> <li>Weighting ± 0.01 kg./ 60 kg.</li> </ul>		
4		Mixing	High Speed Mixer	<ul> <li>Max 250 kg./ Batch</li> <li>Amp Meter 0-80 Amp.</li> <li>Speed 450 - 1750 rpm</li> </ul>		
5		Feeder	Gravimetric Feeder	• Max Load 80%		
6		Mixing	Kneader	• Max 625 rpm.		
7		Extrusion	Single Screw Extruder	• 1,300-2,500 kg./ Hrs. • Temperature 100-250 °C	Rerun Process	
7		Extrusion	Twin Screw Extruder	• 700-1,000 kg./ Hrs. • Temperature 150-260 °C	Rerun Process	

Product Name Filler Masterbatch		PROCESS FLOW CHART					
Step	Graphical Symbol		Process Name	Equipment	Key Product & Key Control Characteristics	Corrective Action	
8			Cooling & Pelletizing	Underwater Pelletizer	• Speed 1,000 - 2,900 rpm. • Speed 600 - 850 rpm.	Rerun Process	
9			Final Inspection	Spectrophotometer  Microscope  Magnifier  Karl Fischer  Moisture Balance  Bulk Density Tester  Density Tester  Furnance  High Performance Liquid  Chromatography (HPLC)  Filter Test  Film Blowing  Differential Scanning  Calorimeter (DSC)	<ul> <li>Delta E (Color Shade)</li> <li>Dispersion</li> <li>Homogeneity</li> <li>Contamination</li> <li>Moisture</li> <li>Bulk Density</li> <li>Density</li> <li>Ash Content</li> <li>Additive Content</li> <li>Filter Value</li> <li>Dispersion Index</li> <li>Oxidation Induction Time (O.I.T)</li> </ul>	Adjust/ Rerun/ Record QC-Report (LA-F-006)	
10			Packing End	Scales	Weighting/ Identify Tag & Lable	Standard Packaging Operation	