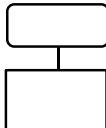
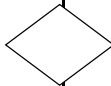



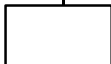
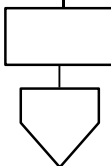
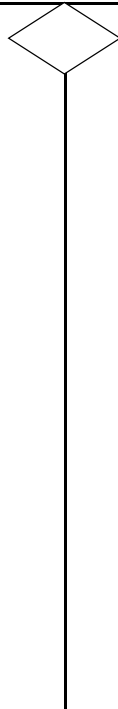
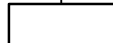
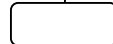


| Product Name | | PROCESS FLOW CHART ต้นฉบับ | | | |
|-------------------|---|---|------------------------------------|--|--|
| Black Masterbatch | | | | | |
| Step | Graphical Symbol | Process Name | Equipment | Key Product & Key Control Characteristics | Corrective Action |
| 1 |  | Start Raw Material Received | Scales | • Code No., Quantity • Weighting ± 1 % / Container | 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 | • Weighting ± 0.5 g./ 7.5 kg. • Weighting ± 0.01 kg./ 60 kg. | |
| 4 |  | Mixing | High Speed Mixer | • Max 100 kg./ Batch • Amp Meter 20-70 Amp. | |
| 5 |  | Feeder | Gravimetric Feeder | • Max Load 80% | |
| 6 |  | Extrusion | Buss Kneader | • 500 - 1,200 kg./ Hrs • Temperature 160-300 °C | Rerun Process |
| 7 |  | Cooling & Pelletizing | Underwater Pelletizer | • Speed 500-3600 rpm. | Rerun Process |

| Product Name | | PROCESS FLOW CHART | | | |
|-------------------|--|--------------------|--|--|---|
| Black Masterbatch | | | | | |
| Step | Graphical Symbol | Process Name | Equipment | Key Product & Key Control Characteristics | Corrective Action |
| 8 |  | 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 style="list-style-type: none">• Delta E (Color Shade)• Dispersion• Homogeneity• Contamination• Moisture• Bulk Density• Density• Ash Content• Additive Content• Filter Value• Dispersion Index• Oxidation Induction Time (O.I.T) | Adjust/ Rerun/ Record QC-Report (LA-F-006) |
| 9 |   | Packing End | Scales | <ul style="list-style-type: none">• Weighting/ Identify Tag & Lable | Standard Packaging Operation |