




Product Name			CONTROL PLAN										Prepared by	Checked by	Approved by
Black Filler Masterbatch															
Process Number	Process Flow	Process Name/ Operation Description	Machine, Device, Jig, Tools For Manufacturing	Characteristics			Special Char. Class	Methods						Responsibility	Reaction plan
	Main			No.	Product	Process		Product/Process Specification/Tolerance	Evaluation Measurement Technique	Sample		Control Method			
										Size	Freq.	Manuf.	Q.C		
1		Incoming		01	Visual Control			<ul style="list-style-type: none"> Pigment Filler Additive 	<ul style="list-style-type: none"> Code No. Lot. R/M Quantity 	1	Bag	WH-P-001 WH-F-001 ใบส่งของ Invoice PO COA		△ ▲	Return Supplier / Record Incoming Material (WH-F-002)
				02	Weighting			± 1%	<ul style="list-style-type: none"> Scales 	25 kg.		WH-F-001		△ ▲	
2		RM/QC		01	Mixing RM			<ul style="list-style-type: none"> Pigment 0.1 g. TiO2 0.9 g. HPPE 100 g. Zinestearate 0.065 g. 	<ul style="list-style-type: none"> Two roll mill 	1	Chip		LA-W-004 LA-S-009 LA-W-032 LA-P-003 LA-S-003 CIE Lab WH-F-002 Sticker	○ ●	Return Warehouse R/M
				02	Measure ΔE			Delta E 0.5-3.00	<ul style="list-style-type: none"> Spectrophotometer 						
3		RM/PREPARATION		01	Weighting		SC	<ul style="list-style-type: none"> ± 0.01 kg./60 kg. ± 0.5 g /7.5 kg 	<ul style="list-style-type: none"> Scales 	1	Time	WH-W-003 PL-F-002 PL-F-003		△ ▲	
4		Mixing	High Speed Mixer	01	Mix			Amp Meter 20-40 Amp.	<ul style="list-style-type: none"> High Speed Mixer 	1	Time	PD-P-001 PD-P-002 PD-W-038 PD-W-039 PD-F-009 PD-F-024 PD-F-026 PD-F-033 PD-F-035 PD-F-041 PD-S-002 PL-F-002		□ ■	Rerun Process

Responsibility symbol ; △ = Warehouse Operator





▲ = Warehouse Manager



○ = QC & Lap Operator


● = QC & Lap Manager



□ = Production Operator



■ = Production Manager



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										Size	Freq.	Manuf.	Q.C		
5		Feeder	FARREL	01	Gravimetric Feeder		SC	<ul style="list-style-type: none"> Max Load 80% 	<ul style="list-style-type: none"> Single Screw Extruder Twin Screw Extruder 	1	Time	PD-P-001 PD-P-002 PD-W-065 PD-W-031 PD-F-051 PD-F-011 PD-F-016 PD-F-024 PD-S-002 PL-F-002		<input type="checkbox"/> <input checked="" type="checkbox"/>	Rerun Process
6		Mixing	FARREL	01	Kneader		SC	<ul style="list-style-type: none"> Max 750 rpm. 	<ul style="list-style-type: none"> Twin Screw 	1	Time	PD-P-001 PD-P-002 PD-W-065 PD-W-031 PD-F-051 PL-F-002		<input type="checkbox"/> <input checked="" type="checkbox"/>	Rerun Process
7		Extrusion	FARREL	01	Extrude			<ul style="list-style-type: none"> 1,300-2,700 kg./ Hrs. Temperature Min 100 °C Temperature Max 260 °C 	<ul style="list-style-type: none"> Single Screw Extruder 	1	Time	PD-P-001 PD-P-002 PD-W-065 PD-W-031 PD-F-051 PD-F-011 PD-F-016 PD-F-024 PD-S-002 PL-F-002		<input type="checkbox"/> <input checked="" type="checkbox"/>	Rerun Process
8		Cooling & Pelletizing	Underwater Pelletizer	01	Visual Control			N-A	<ul style="list-style-type: none"> Speed 250-4,500 rpm. 	N/A	N/A	PD-W-065		<input type="checkbox"/> <input checked="" type="checkbox"/>	Rerun Process


Responsibility symbol ;  = Warehouse Operator = Warehouse Manager = QC & Lap Operator = QC & Lap Manager = Production Operator = Production Manager



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	Main			No.	Product	Process		Product/Process Specification/Tolerance	Evaluation Measurement Technique	Sample		Control Method			
										Size	Freq.	Manuf.	Q.C		
9		Final Test		01	Delta E (Color Shade)		SC	0.5-3.00	• Spectrophotometer	1	Chip		LA-P-003 LA-W-040 LA-W-041 CIE Lab LA-W-020 LA-W-031 LA-F-006 LA-F-003 LA-F-005 LA-W-019 Sticker LA-W-006 LA-W-005 LA-W-026 LA-W-009 LA-W-039 LA-S-011 ISO18553 (AS DINEN-13900-6)	<input type="radio"/> AdJUST <input type="radio"/> Rerun <input checked="" type="radio"/> LA-F-006 (QC-Report) <input type="radio"/> Add <input type="radio"/> Rerun <input type="radio"/> By Bland	
			02	Dispersion		Visual		• Microscope							
			03	Homogeneity Contamination		Visual		• Magnifier							
			04	Moisture		≤ 0.2 %		• KARL FISCHER • MOISTURE BALANCE							
			05	Bulk Density test		Customer STD Spec		• Bulk Density							
			06	Density test		Customer STD Spec		• Density							
			07	Ash Conten		Customer STD Spec		• Furnance							
			08	Additive Conten		Customer STD Spec		• HPLC							
			09	Filter Value		Customer STD (< 2 bar)		• Filter test							
			10	Dispersion Index		Visual		• Film Blowing							
			11	OIT		Customer STD Spec		• Film Blowing							



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 = Warehouse Manager



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 = Production Operator
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Product Name			CONTROL PLAN							Prepared by		Checked by		Approved by	
Black Filler Masterbatch										DO NOT COPY					
Process Number	Process Flow	Process Name/ Operation Description	Machine, Device, Jig, Tools For Manufacturing	Characteristics			Special Char. Class	Methods						Responsibility	Reaction plan
	Main			No.	Product	Process		Product/Process Specification/Tolerance	Evaluation Measurement Technique	Sample		Control Method			
										Size	Freq.	Manuf.	Q.C		
10		Packing		01	Weighting			10 g.	<ul style="list-style-type: none"> • Scales • Visual 	1	Bag	PD-W-028 PD-W-055 PD-F-012 PD-F-018 PD-F-021 PD-F-023 PD-F-030 PD-S-002 PL-F-002 Sticker		<input type="checkbox"/> <input checked="" type="checkbox"/>	Rework

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 = Warehouse Manager

 = QC & Lap Operator
 = QC & Lap Manager

 = Production Operator
 = Production Manager