| Product Name | | | | | | | CO | NTROL PLA | N | | | ต้านจ | ฉบับ | | | |
|--------------------|------------|--------------------------|--------------------|------|----------------|---------|----------------|--|----------------------------|--------|-------|--|--|--|---|-----|
| Filler Masterbatch | | | | | | | <u> </u> | MINOLILA | | | | V1 V0 1 | 70BB | | | |
| D | Process | Process Name/ | Machine,Device | | Characteris | stics | Special | | Method | ls | | | | Responsibility | Danation | |
| Process Number | Flow | Operation Description | , Jig,Tools For | No. | Product | Process | Char. Class | Product/Process | Evaluation Measurement | Sam | ple | Contro | ol Method | suod | Reaction plan | |
| | Main | Description | Manufacturing | INO. | Tioduct | 1 1000 | Olass | Specification/Tolerance | Technique | Size | Freq. | | Q.C | Res | | |
| 1 | \Diamond | Incoming | | 01 | Visual Control | | | PigmentFillerAdditive | Code No. Lot. R/M Quantity | 1 | Bag | WH-P-001 WH-F-001 ใบส่งของ Invoice PO COA | -F-001 ส่งของ voice PO | <u>△</u> | Return Supplier / Record Incoming Material (WH-F- | |
| | | | | 02 | Weighting | | | ± 1% | • Scales | 25 kg. | | WH-F-001 | | \triangle | 002) | |
| 2 | \Diamond | RM/QC | | 01 | Mixing RM | | | Pigment 0.1 g.Ti02 0.9 g.HPPE 100 g.Zinestearate 0.065 g. | • Two roll mill | 1 | Chip | | LA-W-004 LA-S-009 LA-W-032 LA-P-003 | 0 | <u> </u> | |
| | | | | 02 | Measure △E | | | Delta E 0.5-3.00 | Spectrophotometer | | | | | LA-S-003 CIE Lab WH-F-002 Sticker | | K/M |
| 3 | | RM/PREPARATI ON | | 01 | Weighting | | SC | • ± 0.01 kg./60 kg. • ± 0.5 g ./7.5 kg | Scales | 1 | Time | WH-W-003 PL-F-002 PL-F-003 | | \triangle | | |
| 4 | | Mixing | High Speed Mixer | 01 | Mix | | | Amp Meter 20-70 Amp. | 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-033 PD-F-035 PD-F-041 PD-S-002 PL-F-002 | | | Rerun Process | |

Responsibility symbol ; \triangle = Warehouse Operator

= Warehouse Manager

○ = QC & Lap Operator

= QC & Lap Manager

= Production Operator

= Production Manager

| Product Name Filler Masterbatch | | | | | | | CO | NTPOL DLA | NI | | | | | | |
|---------------------------------|---------|-----------------------|--------------------|------|-----------------------|---------|----------------|---|---|------|-------|--|--------|-----|---------------|
| | | | CONTROL PLAN | | | | | | | | | | | | |
| | Process | Process Name/ | Machine,Device | | Characteristics | | Special | | Methods | | | | | | |
| Process Number | Flow | Operation Description | , Jig,Tools For | No. | Product | Process | Char. Class | Product/Process | Evaluation Measurement | San | nple | Control | Method | ■ | Reaction plan |
| | Main | Description | Manufacturing | INO. | Floduct | Flocess | Olass | Specification/Tolerance | Technique | Size | Freq. | | Q.C | Res | |
| _ | | | FARREL | 01 | Gravimetric Feeder | | | Max Load 80% | Single Screw Extruder Twin Screw Extruder | | | PD-P-001 PD-P-002 PD-W-027 PD-W-031 PD-F-003 PL-F-002 | | | Rerun Process |
| 5 | | Feeder | TEK96 | 02 | Gravimetric Feeder | | - SC | Max Load 80% | Single Screw Twin Screw | 1 | Time | PD-F-011 PD-F-016 PD-F-024 PD-F-029 PD-S-002 PL-F-002 | | | |
| 6 | | Mixing | FARREL | 01 | Kneader | | SC | • Max 625 rpm. | Twin Screw | 1 | Time | PD-P-001 PD-P-002 PD-W-027 PD-W-031 PD-F-003 PL-F-002 | | | Rerun Process |
| | | | FARREL | 01 | Extrude | | | • 1,300-2,500 kg./ Hrs. • Temperature Min 100 °C • Temperature Max 250 °C | Single Screw Extruder | | | PD-P-001 PD-P-002 PD-W-003 PD-W-005 PD-W-008 PD-W-027 PD-W-031 | | | |
| 7 | | Extrusion | TEK96 | 02 | Extrude | | | • 700-1,000 kg./ Hrs. • Temperature Min 150 °C • Temperature Max 260 °C | Twin Screw Extruder | 1 | Time | PD-F-003 PL-F-002 PD-F-011 PD-F-016 PD-F-024 PD-F-029 PD-S-002 PL-F-002 | | | Rerun Process |

Responsibility symbol; \triangle = Warehouse Operator

○ = QC & Lap Operator

 \square = Production Operator

■ = Production Manager

| Product Name Filler Masterbatch | | CONTROL PLAN | | | | | | | | | | | | | |
|---------------------------------|------------|---------------|--------------------|-----|------------------------------|---------|-------------------|-------------------------|---------------------------------------|------|-------|----------------------------------|----------------------------------|---|-----------------------------|
| | Process | Process Name/ | Machine,Device | | Characteris | tics | Special | | Methods | 3 | | | | AdJ Reric LA-I (QC Add Reric | |
| Process Number | Flow | Operation | , Jig,Tools For | | . . | 5 | Char. | Product/Process | Evaluation | Sar | nple | Contro | l Method | | Reaction plan |
| | Main | Description | Manufacturing | No. | Product | Process | Class | Specification/Tolerance | Measurement Technique | Size | Freq. | Manuf. | Q.C | Resp | |
| | | Cooling & | Underwater | 01 | Visual Control | | | N-A | • Speed 1,000-2,900 rpm | N/A | N/A | PD-W-027 | | | Rerun Process |
| 8 | | Pelletizing | Pelletizer | 02 | Visual Control | | | N-A | • Speed 600-850 rpm. | N/A | N/A | PD-W-008 | | | Rerun Process |
| | | | | 01 | Delta E (Color Shade) | | 0.5-3.00 | Spectrophotometer | | | | LA-P-003 LA-W-040 LA-W-041 | | | |
| | | | | 02 | Dispersion | | | Visual | Micoscope | | | | | 0 | AdJUST Rerun LA-F-006 |
| 9 | \Diamond | Final Test | | 03 | Homogeneity Contamination | | SC | Visual | Magnifier | 1 | Chip | | LA-F-006 LA-F-003 LA-F-005 | • | (QC-Report) Add Rerun |
| | | | | 04 | Moisture | | | ≤ 0.2 % | KARL FISCHER MOISTURE BALANCE | | | | LA-W-019 | | By Bland |
| | | | | 05 | Bulk Density test | | Customer STD Spec | Bulk Density | | | | Sticker LA-W-006 LA-W-005 | | | |
| | | | | 06 | Density test | | | Customer STD Spec | • Density | | | | LA-W-026 LA-W-009 | | |
| | | | | 07 | Ash Conten | | | Customer STD Spec | Furnance | | | | LA-W-039 LA-S-011 | | |
| | | | | 08 | Additive Conten | | | Customer STD Spec | • HPLC | | | | ISO18553 (AS DINEN- | | |
| | | | | 09 | Filter Value | | 1 | Customer STD (< 2 bar) | • Filter test | | | | 13900-6) | | |
| | | | | 10 | Dispersion Index | | | Visual | • Film Blowing | | | | | | |
| ì | | | | 11 | OIT | | | Customer STD Spec | • Film Blowing | | | | | | |

Responsibility symbol ; \triangle = Warehouse Operator

▲ = Warehouse Manager

○ = QC & Lap Operator

= QC & Lap Manager

☐ = Production Operator

= Production Manager

| Product Filler Mast | | | | | | | COI | NTROL PLA | N | | | | | | |
|------------------------|-----------------|--------------------------|--------------------------------|-----|-------------|---------|----------------|--|--|------|---------------|---|-----|----------------|----------|
| Process Number | Process Flow | Process Name/ | Machine,Device | | Characteris | tics | Special | | Method | 1 | | | | Responsibility | Reaction |
| | Main | Operation Description | Jig,Tools For Manufacturing | No. | Product | Process | Char. Class | Product/Process Specification/Tolerance | Evaluation Measurement Technique | Size | rple Freq. | | Q.C | | plan |
| 10 | | Packing | | 01 | Weighting | | | 10 g. | Scales Visual | 1 | Bag | PD-W-028 PD-W-055 PD-F-012 PD-F-021 PD-F-023 PD-F-030 PD-S-002 PL-F-002 Sticker | | | Rework |

Responsibility symbol; \triangle = Warehouse Operator

▲ = Warehouse Manager

○ = QC & Lap Operator

● = QC & Lap Manager

☐ = Production Operator

= Production Manager