

JAM POLYMER INDUSTRIES DEVELOPMENT

TECHNICAL PRODUCT PORTFOLIO

PRELIMINARY DEVELOPMENT SPECIFICATIONS

25 PRODUCT DATA SHEETS • REV 0.3 • 2026-07-21



DOCUMENT PURPOSE

This controlled portfolio defines preliminary engineering targets, test methods and qualification requirements for product development. Values are not commercial guarantees and shall be replaced by approved production data after formulation freeze, laboratory validation and manufacturing qualification.

Document owner: Technical and R&D Department | **Classification:** Internal

Document limitation: This portfolio is not a Safety Data Sheet and does not establish regulatory, food-contact, medical, UL, ATEX, OEM or IEC compliance. Any such claim requires grade-specific approval and supporting documentation.

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JAM POLYMER INDUSTRIES DEVELOPMENT

PP-TD20

20% Talc-Filled Polypropylene Compound



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-TD20	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A balanced injection-moulding PP compound designed for improved stiffness, dimensional stability and economical part production.

Applications: Appliance housings; Industrial components; Automotive non-safety trim.

Key features: Balanced stiffness/impact; Reduced shrinkage; Good mouldability.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (talc-correlated)	ISO 3451-1; validated internal correlation	20 ± 1	wt.%
Technical note: Valid as talc content only when talc is the sole inorganic component.			
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	12 ± 3	g/10 min
Density, 23°C	ISO 1183-1	1.045–1.065	g/cm³
Tensile stress at yield, 23°C	ISO 527-2	30–34	MPa
Flexural modulus, 23°C	ISO 178	2,300–2,800	MPa
Notched Izod impact, 23°C	ASTM D256	30–45	J/m
HDT, 1.82 MPa, unannealed	ASTM D648	70–80	°C
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, talc and an application-specific stabiliser package.

PROCESSING GUIDANCE

Injection moulding. Start with melt 220–250°C and mould 30–60°C. PP is not hygroscopic; dry only after documented moisture/condensation exposure. Freeze specimen preparation and conditioning before comparing lots.

QUALIFICATION REQUIREMENTS

Three independent pilot batches, followed by at least three production-scale qualification lots. Define routine release tests (MFR, residue, density, colour) separately from periodic type tests. Do not set commercial limits from only three pilot lots.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-TD30

30% Talc-Filled Polypropylene Compound



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-TD30	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A higher-stiffness PP compound for dimensionally stable moulded parts requiring a cost/performance balance.

Applications: Appliance structural parts; Electrical housings; Automotive carriers and covers.

Key features: Higher rigidity; Good dimensional stability; Low warpage design target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (talc-correlated)	ISO 3451-1; validated internal correlation	30 ± 1.5	wt.%
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	10 ± 2	g/10 min
Density, 23°C	ISO 1183-1	1.13–1.16	g/cm³
Tensile strength, 23°C	ISO 527-2	31–35	MPa
Flexural modulus, 23°C	ISO 178	2,700–3,200	MPa
Notched Izod impact, 23°C	ASTM D256	23–32	J/m
HDT, 0.455 MPa, unannealed	ASTM D648	125–135	°C
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, controlled-particle-size talc and stabilisers.

PROCESSING GUIDANCE

Injection moulding. Initial window: melt 220–250°C; mould 30–60°C. Gate and rib design should account for reduced shrinkage.

QUALIFICATION REQUIREMENTS

Qualify filler dosing/dispersion, MFR, density, tensile/flexural/impact, HDT, shrinkage, warpage and colour on independent lots. Establish control-chart limits only after production-scale data are available.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-TD40

40% Talc-Filled Polypropylene Compound

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-TD40	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A high-modulus PP compound for rigid, dimensionally controlled mouldings and metal-replacement studies.

Applications: Structural housings; HVAC/appliance components; Automotive brackets and covers.

Key features: High stiffness; Low mould shrinkage; Heat-stabilised formulation option.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (talc-correlated)	ISO 3451-1; validated internal correlation	40 ± 1.5	wt.%
Melt volume-flow rate, 230°C/2.16 kg	ISO 1133-1	11 ± 2	cm³/10 min
Density, 23°C	ISO 1183-1	1.23–1.26	g/cm³
Tensile stress at break, 23°C	ISO 527-2	23–28	MPa
Flexural modulus, 23°C	ISO 178	4,500–5,200	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	2.0–3.0	kJ/m²
HDT, 0.45 MPa, unannealed	ISO 75-2	125–135	°C
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, high-loading talc and heat/process stabilisers.

PROCESSING GUIDANCE

Injection moulding. Initial window: melt 220–260°C; mould 30–60°C. Avoid excessive shear and verify weld-line strength.

QUALIFICATION REQUIREMENTS

Pilot-lot MVR, filler, density, mechanical/thermal performance, shrinkage, warpage and ageing.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-GF20

20% Glass-Fibre Reinforced Polypropylene

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-GF20	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

Chemically coupled PP compound combining useful stiffness, strength and heat resistance with practical injection flow.

Applications: Appliance frames; Electrical and industrial parts; Under-hood non-safety components.

Key features: Chemically coupled; Higher heat resistance; Improved creep resistance.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (glass-correlated)	ISO 3451-1; validated formulation mass balance	20 ± 1	wt. %
Technical note: Ash is not selective for glass if mineral pigments/fillers are present.			
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	5 ± 2	g/10 min
Density, 23°C	ISO 1183-1	1.03–1.06	g/cm³
Tensile strength, 23°C	ISO 527-2	65–72	MPa
Flexural modulus, 23°C	ISO 178	3,700–4,300	MPa
Notched Izod impact, 23°C	ASTM D256	65–85	J/m
HDT, 1.82 MPa, unannealed	ASTM D648	140–150	°C
Residual fibre-length distribution	Validated burn-off + microscopy	To be established	µm
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, chopped glass fibre, coupling agent and heat stabilisers.

PROCESSING GUIDANCE

Injection moulding. Start with melt 220–250°C and mould 40–70°C. Use wear-resistant plasticising components. Add glass through the validated side-feed position and control screw speed to protect fibre length. Dry only if exposed/condensed moisture is demonstrated.

QUALIFICATION REQUIREMENTS

Glass content/length retention, MFR, mechanical/thermal properties, anisotropic shrinkage and heat ageing.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-GF30

30% Glass-Fibre Reinforced Polypropylene

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-GF30	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A medium-high-flow structural PP compound for demanding moulded components with high stiffness and strength.

Applications: Pump and appliance components; Industrial brackets; Automotive technical parts.

Key features: High stiffness and strength; Low creep; Low CLTE design target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (glass-correlated)	ISO 3451-1; validated formulation mass balance	30 ± 1.5	wt.%
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	14 ± 3	g/10 min
Density, 23°C	ISO 1183-1	1.10–1.13	g/cm³
Tensile strength, 23°C	ISO 527-2	85–95	MPa
Flexural modulus, 23°C	ISO 178	5,500–6,500	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	8–11	kJ/m²
HDT, 1.80 MPa, unannealed	ISO 75-2	140–150	°C
Residual fibre-length distribution	Validated burn-off + microscopy	To be established	µm
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, 30% chopped glass fibre, coupling agent and stabilisers.

PROCESSING GUIDANCE

Injection moulding. Initial melt window 220–260°C; mould 40–70°C. Manage fibre orientation through gate placement and moderate injection speed.

QUALIFICATION REQUIREMENTS

Glass content/dispersion, fibre retention, MFR, tensile/flexural/impact, HDT, shrinkage and ageing.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-GF40

40% Glass-Fibre Reinforced Polypropylene

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-GF40	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A high-performance, heat-stabilised structural PP compound for high-stiffness parts and metal-replacement development.

Applications: Structural appliance parts; Industrial supports; Under-hood technical components.

Key features: Very high modulus; High heat resistance; Low creep under load.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (glass-correlated)	ISO 3451-1; validated formulation mass balance	40 ± 1.5	wt.%
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	5.5 ± 2	g/10 min
Density, 23°C	ISO 1183-1	1.20–1.24	g/cm ³
Tensile strength, 23°C	ISO 527-2	88–98	MPa
Flexural modulus, 23°C	ISO 178	7,000–8,000	MPa
Notched Izod impact, 23°C	ASTM D256	70–90	J/m
HDT, 1.82 MPa, unannealed	ASTM D648	145–160	°C
Residual fibre-length distribution	Validated burn-off + microscopy	To be established	µm
Mould shrinkage, flow/transverse	ISO 294-4	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, 40% chopped glass fibre, coupling and heat-stabiliser system.

PROCESSING GUIDANCE

Injection moulding. Initial melt window 225–260°C; mould 40–70°C. High wear resistance and careful gate/orientation design are required.

QUALIFICATION REQUIREMENTS

Fibre content/length/dispersion, flow, mechanical/thermal performance, anisotropy, creep and heat ageing.

JAM POLYMER INDUSTRIES DEVELOPMENT

TPO-I20

Automotive Interior TPO — 20% Mineral Filled



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	TPO-I20	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

Impact-modified mineral-filled PP/TPO designed for interior trim with a balanced stiffness/impact profile and low-emission development target.

Applications: Door trim; Pillar trim; Console and interior covers.

Key features: Impact/stiffness balance; Scratch-resistant option; Low-odour/VOC development target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (mineral-correlated)	ISO 3451-1; validated formulation mass balance	20 ± 2	wt.%
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	18 ± 3	g/10 min
Density, 23°C	ISO 1183-1	1.03–1.05	g/cm ³
Tensile stress at yield, 23°C	ISO 527-2	18–22	MPa
Flexural modulus, 23°C	ISO 178	1,700–2,100	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	20–30	kJ/m ²
Notched Charpy impact, -30°C	ISO 179-1/1eA	2–5	kJ/m ²
HDT, 0.45 MPa, unannealed	ISO 75-2	95–105	°C
Odour / VOC / fogging / scratch	Named OEM or customer method	To customer limit	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, elastomer modifier, mineral filler and interior-stabiliser package.

PROCESSING GUIDANCE

Injection moulding. Initial melt 200–240°C; mould 30–60°C. Final colour, grain, scratch, odour, fogging and VOC requirements must be matched to the customer/OEM specification.

QUALIFICATION REQUIREMENTS

Mechanical and thermal targets are only screening gates. Commercial automotive release additionally requires an identified OEM specification, plaque/grain/colour definition, odour, VOC, fogging, scratch, emission ageing, UV (where relevant), dimensional stability and part trials.

JAM POLYMER INDUSTRIES DEVELOPMENT

TPO-E20UV

Automotive Exterior TPO — 20% Mineral, UV Stabilised

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	TPO-E20UV	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

UV-stabilised, impact-modified mineral-filled TPO for non-safety exterior trim and durable appearance studies.

Applications: Bumper trim; Wheel-arch cladding; Exterior covers and guards.

Key features: High impact target; UV-stabilised formulation; Paintable option subject to validation.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Inorganic residue (mineral-correlated)	ISO 3451-1; validated formulation mass balance	20 ± 2	wt. %
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	16–22	g/10 min
Density, 23°C	ISO 1183-1	1.04–1.07	g/cm ³
Flexural modulus, 23°C	ISO 178	1,300–1,800	MPa
Notched Izod impact, 23°C	ASTM D256	350–500	J/m
Low-temperature impact	Named OEM/customer method	To be established	
Xenon-arc weathering and colour/gloss retention	ISO 4892-2 or named OEM method	To be established	
Paint adhesion / thermal cycling	Named coating/OEM method	To be established	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, elastomer, mineral filler, UV and thermal stabilisers.

PROCESSING GUIDANCE

Injection moulding. Initial melt 200–240°C; mould 30–60°C. UV/colour retention, paint adhesion, low-temperature impact and thermal cycling require customer-specific validation.

QUALIFICATION REQUIREMENTS

Do not use ISO 4892-3 as a universal automotive exterior surrogate. Select xenon-arc or the exact OEM weathering cycle, define colour and texture, then test impact after weathering, paint adhesion, thermal cycling, scratch and complete part performance.

JAM POLYMER INDUSTRIES DEVELOPMENT

PE-RM-UV

UV-Stabilised Polyethylene for Rotomoulding

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PE-RM-UV	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A medium-density rotomoulding compound/powder platform targeting balanced flow, ESCR, low-temperature impact and outdoor durability.

Applications: Water and chemical tanks; Agricultural containers; Outdoor industrial products.

Key features: 35-mesh powder option; High ESCR target; UV8/UV20 variants after validation.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 190°C/2.16 kg	ISO 1133-1	3.2–4.0	g/10 min
Density, 23°C	ISO 1183-1	0.938–0.941	g/cm ³
ESCR, F50, 100% Igepal, Condition A	ASTM D1693	≥ 1,000	h
Tensile stress at yield, 23°C	ISO 527-2	≥ 18	MPa
Flexural modulus, 23°C	ISO 178	750–900	MPa
Tensile elongation at break	ISO 527-2	≥ 400	%
Powder particle-size distribution	Validated sieve method	≥95% passing 500 µm; fines limit TBD	
Dry flow / bulk density	ASTM D1895 or validated internal method	To be established	
Low-temperature impact / full-part drop	ASTM D1998/customer part method	To be established	
UV-weathering retention	ASTM G155 or ISO 4892-2	To be established	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

A validated Jam MDPE/LLDPE rotomoulding candidate, UV/thermal package and optional pigment. Pellet-to-powder grinding conditions and powder quality are part of the product specification.

PROCESSING GUIDANCE

Rotational moulding. Cycle, oven temperature, wall thickness and venting must be developed on the customer mould. Powder quality and oven-ageing window require pilot trials.

QUALIFICATION REQUIREMENTS

MFR, density, ESCR, tensile/impact, powder distribution, pinholes, colour, UV weathering and full-tank drop testing.

JAM POLYMER INDUSTRIES DEVELOPMENT

PE-JKT-BK

Black Polyethylene Cable-Jacketing Compound

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PE-JKT-BK	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A black, UV/thermal-stabilised HDPE/LLDPE jacketing compound platform for power, telecom, conduit and industrial cable development.

Applications: Power-cable sheath; Telecom cable jacket; Conduit and industrial jacketing.

Key features: High ESCR target; UV and thermal stabilisation; Electrical-insulation performance target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 190°C/2.16 kg	ISO 1133-1	0.25–0.40	g/10 min
Density	ISO 1183-1	0.953–0.960	g/cm ³
Carbon-black content	IEC 60811-605	2.0–3.0	wt.%
Carbon-black dispersion	IEC 60811-607	To applicable cable/customer limit	
Tensile stress at break	IEC 60811-501 / ISO 527-2 as agreed	> 30	MPa
Elongation at break	IEC 60811-501 / ISO 527-2 as agreed	≥ 600	%
Properties after ageing, 110°C/336 h	IEC 60811-401 / agreed cable standard	To be established	
ESCR	ASTM D1693	> 2,000	h
OIT at 210°C	ISO 11357-6	> 30	min
Volume resistivity	IEC 62631-3-1	> 1×10 ¹⁶	Ω·cm
Moisture content	ISO 15512	< 0.03	wt.%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected HDPE/LLDPE from Jam Petrochemical, fine carbon black, antioxidant and processing-stabiliser system.

PROCESSING GUIDANCE

Cable extrusion. Establish barrel/die temperatures and draw-down on the target line. Screen-pack, die build-up, shrinkback and conductor/insulation compatibility must be qualified.

QUALIFICATION REQUIREMENTS

Compound data alone do not establish compliance with a cable standard. Qualify carbon-black dispersion, thermal ageing, shrinkback, ESCR, electrical properties, extrusion surface and the complete cable construction against the named standard and sheath designation.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-BK40-PE

40% Carbon-Black Masterbatch — PE Carrier

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-BK40-PE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A high-loading black masterbatch platform for colouring and UV screening in compatible polyethylene applications.

Applications: Film and sheet; Pipe and conduit — application-specific approval; Moulded PE products.

Key features: 40% pigment target; High jetness option; General-purpose PE compatibility.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carbon-black content	Validated TGA + formulation mass balance	40 ± 1	wt. %
Carrier identity	FTIR + approved raw-material record	Polyethylene; sub-grade declared	
Melt flow rate (condition to be frozen)	ISO 1133-1	To be established	
Moisture / volatile content	ISO 15512 or validated loss method	≤ 0.20	wt. %
Filter pressure value	EN 13900-5 or validated equivalent	To be established	bar·cm ² /g
Dispersion in defined let-down resin	Microscopy/customer method	To be established	
Colour strength / jetness	Defined reference resin and colorimetry	To be established	
Recommended let-down ratio	End-use trial	Application-specific; typically 1–6.5	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Compatible PE carrier, selected furnace carbon black and processing/dispersion aids.

PROCESSING GUIDANCE

Preblend or gravimetrically dose into a compatible PE at the validated let-down ratio. Pressure-pipe use requires dedicated carbon-black type, dispersion and long-term qualification.

QUALIFICATION REQUIREMENTS

The 40% architecture is commercially credible, but final performance depends on carbon-black type, structure, particle size, carrier rheology and dispersion. Pipe, film, fibre, geosynthetic and cable applications require separate sub-grades and tests.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-BK40-PP

40% Carbon-Black Masterbatch — PP Carrier



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-BK40-PP	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A proposed PP-carrier black-masterbatch platform. It is not yet supported by a PP-specific published benchmark or a frozen carbon-black/carrier formulation and must not be presented as a released grade.

Applications: Injection-moulded PP; PP sheet and profiles; Compounds and nonwoven development.

Key features: 40% pigment target; PP-compatible carrier; High colour strength target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carbon-black content	Validated TGA + formulation mass balance	40 ± 1	wt.%
Carrier identity	FTIR + approved raw-material record	PP sub-grade must be declared	
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	To be established by sub-grade	
Moisture / volatile content	ISO 15512 or validated loss method	≤ 0.20	wt.%
Filter pressure value	EN 13900-5 or validated equivalent	To be established	bar·cm ² /g
Dispersion / colour strength	Defined PP let-down protocol	To be established	
Recommended let-down ratio	End-use trial	To be established	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

PP-compatible carrier, selected furnace carbon black and dispersion aids.

PROCESSING GUIDANCE

Preblend or gravimetrically dose into compatible PP. Fibre/nonwoven use requires fine filtration, pressure-rise and spin-pack testing before approval.

QUALIFICATION REQUIREMENTS

Pigment content/type, dispersion, filter-pressure value, moisture, MFR, colour strength, jetness and end-use trials.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-W70-PE

70% Titanium-Dioxide White Masterbatch — PE Carrier



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-W70-PE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A high-opacity white masterbatch platform for compatible polyolefin film, sheet, blow-moulding and injection applications.

Applications: Blown/cast film; Sheet and profiles; Blow and injection moulding.

Key features: 70% TiO2 target; High opacity and whiteness; Broad PE-process compatibility target.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Titanium-dioxide content	Validated ash/TGA + XRF/formulation balance	70 ± 2	wt.%
Pigment identity	XRF + supplier CoA	Surface-treated rutile TiO ₂	
Carrier identity	FTIR + approved raw-material record	LLDPE-compatible; grade declared	
Moisture / volatile content	ISO 15512 or validated loss method	≤ 0.20	wt.%
Melt flow rate (condition to be frozen)	ISO 1133-1	To be established	
Filter pressure value	EN 13900-5 or validated equivalent	To be established	bar·cm ² /g
Whiteness / yellowness / opacity	Defined reference resin, thickness and colorimetry	To be established	
Recommended let-down ratio	End-use trial	Application-specific; typically 1–5	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

LLDPE-compatible carrier, selected rutile TiO2 and dispersion/process aids.

PROCESSING GUIDANCE

Dose into a compatible polyolefin at the validated let-down ratio. Dry only if moisture exposure occurred. Screen pressure, opacity and film surface must be checked on the target line.

QUALIFICATION REQUIREMENTS

Blue-wool 8 and 300°C stability are supplier/application ratings, not automatic batch-release properties of this masterbatch. Validate dispersion, FPV, colour coordinates, opacity, surface quality and regulatory status in each final application.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-UV-PE

UV-Stabiliser Masterbatch — PE Carrier

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-UV-PE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A PE-compatible UV-stabiliser product platform. HALS and UV absorber must not be combined or dosed generically; each film, rotomoulding or outdoor-part sub-grade requires a defined active package.

Applications: Agricultural and packaging film; Rotomoulded products; Outdoor mouldings and profiles.

Key features: Outdoor-durability platform; Low-colour option; Film/moulding variants.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carrier identity and MFR	FTIR + ISO 1133-1	Defined for each sub-grade	
Active chemistry	Supplier identity + validated HPLC/assay	HALS and/or UV absorber; exact chemistry declared	
Total active loading	Validated assay + formulation balance	To be established by sub-grade	wt. %
Moisture / volatile content	Validated method	To be established	wt. %
Dosage	Active-ppm calculation + end-use trial	Thickness, pigment, climate and lifetime dependent	
Weathering retention	ISO 4892-2/-3 or named application method	To be established in final formulation	
Migration / bloom / colour	Defined end-use protocol	To be established	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

PE-compatible carrier with an application-selected HALS, UV absorber and antioxidant package.

PROCESSING GUIDANCE

Dose gravimetrically into compatible PE. Required dosage depends on part thickness, pigment, geography, lifetime, processing history and additive interactions.

QUALIFICATION REQUIREMENTS

Active content/identity, dispersion, colour, migration/bloom, UV exposure and retention of tensile/impact/colour properties.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-UV-PP

UV-Stabiliser Masterbatch — PP Carrier

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-UV-PP	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A PP-compatible UV-stabiliser platform requiring separate moulding and fibre/nonwoven sub-grades. Active selection must consider pigments, acidic additives, sulphur/halogen exposure, thickness and service climate.

Applications: Outdoor furniture and housewares; PP fibres/nonwovens; Automotive and industrial trim.

Key features: Outdoor PP durability; Low-colour option; Moulding/fibre variants.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carrier identity and MFR	FTIR + ISO 1133-1	Defined for each sub-grade	
Active chemistry	Supplier identity + validated HPLC/assay	HALS and/or UV absorber; exact chemistry declared	
Total active loading	Validated assay + formulation balance	To be established by sub-grade	wt.%
Moisture / volatile content	Validated method	To be established	wt.%
Filter pressure / spin-pack rise	EN 13900-5 or fibre-line method	Required for fibre/nonwoven sub-grade	
Dosage	Active-ppm calculation + end-use trial	Pigment, section, climate and lifetime dependent	
Weathering retention	ISO 4892-2/3 or named application method	To be established in final formulation	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

PP-compatible carrier with a tailored HALS, UV absorber and antioxidant package.

PROCESSING GUIDANCE

Dose gravimetrically into compatible PP. Fibre/nonwoven variants require melt-filtration and spin-pack pressure testing. Dosage is application- and climate-specific.

QUALIFICATION REQUIREMENTS

Active content/identity, dispersion, colour, migration, filtration and UV-retention testing on the final formulation.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-AO

Antioxidant Masterbatch Platform — PE and PP Sub-Grades Required

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-AO	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A primary/secondary antioxidant masterbatch platform intended to improve process stability and thermal-oxidative retention in virgin/reprocessed PE and PP.

Applications: Film reprocessing; Re-pelletising; Moulding and extrusion compounds.

Key features: Process-stability support; Reduced gel/yellowing target; Virgin/recycled polyolefin variants.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carrier identity and MFR	FTIR + ISO 1133-1	Separate PE and PP sub-grades required	
Primary antioxidant identity/assay	Validated HPLC or supplier method	Declared per sub-grade	wt. %
Secondary antioxidant identity/assay	Validated HPLC or supplier method	Declared per sub-grade	wt. %
Moisture / volatile content	Validated method	To be established	wt. %
Dosage	Required-active-ppm calculation	Defined from final active ppm, not a universal LDR	
OIT / melt-stability improvement	ISO 11357-6 + multiple-extrusion protocol	To be established in a named reference resin	
Gels / yellowness / MFR drift	Defined film or reprocessing protocol	To be established	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Compatible polyolefin carrier with a formulation-specific phenolic/phosphite antioxidant system.

PROCESSING GUIDANCE

Dose at the minimum level that achieves the required OIT, colour and mechanical retention. Validate interactions with pigments, fillers, HALS and recycled contaminants.

QUALIFICATION REQUIREMENTS

Active identity/content, OIT, MFR retention, gels, yellowness, odour and mechanical retention after multiple heat histories.

JAM POLYMER INDUSTRIES DEVELOPMENT

MB-SLIP-AB-PE

PE Film Slip / Antiblock Platform — Commercial Sub-Grades Required

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	MB-SLIP-AB-PE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

This is not one technically complete grade. Migratory oleamide, migratory erucamide, non-migratory slip and antiblock systems behave differently and must be issued as separate sub-grades with declared active loading.

Applications: LDPE/LLDPE blown film; Cast film; Lamination and bag applications.

Key features: Controlled COF target; Improved film handling; Fast- and slow-bloom variants.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Carrier identity and MFR	FTIR + ISO 1133-1	Declared for each film sub-grade	
Slip chemistry and assay	Supplier identity + validated assay	One defined system per sub-grade	wt. %
Antiblock type, particle size and loading	Supplier CoA + laser diffraction/assay	Defined per sub-grade	
Moisture / volatile content	Validated method	To be established	wt. %
Dynamic COF after 24 h and 72 h conditioning	ASTM D1894 with fixed film/conditioning	To be established	
Blocking force	ASTM D3354 or customer method	To be established	
Haze / gloss / seal / print-lamination adhesion	Defined film protocol	To be established	
Filter pressure value	EN 13900-5 or validated equivalent	To be established	bar-cm ² /g

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

PE-compatible carrier with selected amide/permanent-slip chemistry and mineral/synthetic-silica antiblock.

PROCESSING GUIDANCE

Dose into compatible PE and condition film before COF measurement. Slip migration is time/temperature dependent and can affect printing, lamination, sealing and corona treatment.

QUALIFICATION REQUIREMENTS

Active/mineral identity and loading, COF versus time, blocking force, haze, gloss, sealability, print/lamination adhesion and migration.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-g-MAH

Maleic-Anhydride-Grafted Polypropylene Coupling Agent

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-g-MAH	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A functionalised PP platform for coupling glass/natural fibres and mineral fillers, improving interfaces in PP compounds and selected blends.

Applications: PP-GF compounds; Natural-fibre PP; Mineral-filled PP and selected PP/PA blends.

Key features: Reactive coupling functionality; Improved filler/fibre adhesion target; Pellet form for dry blending.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	10 ± 2	g/10 min
Density, 23°C	ISO 1183-1	0.90–0.92	g/cm ³
Melting peak	ISO 11357-3	165 ± 5	°C
Vicat softening temperature, A50	ISO 306	145 ± 7	°C
Total acid functionality / calibrated graft level	Extraction + titration and calibrated FTIR	To be established	mg KOH/g or wt. %
Free MAH / extractables / volatile content	Validated extraction + GC/HPLC	To be established	wt. %
Gel fraction	Validated solvent extraction	To be established	wt. %
Coupling performance in defined PP-GF30 reference	Controlled compounding + ISO mechanical tests	Minimum gain to be established	
Recommended addition	Compound DOE	1–5	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain, maleic-anhydride grafting system and stabiliser package.

PROCESSING GUIDANCE

Dry blend or side-feed into PP compounding. Optimise dosage against fibre/filler surface, residence time and required mechanical gain. Avoid excessive thermal history.

QUALIFICATION REQUIREMENTS

A g-MAH grade is not defined by MFR and density alone. Quantify functionality after removing free/extractable species, control residual MAH/odour and demonstrate a reproducible performance gain in a fixed reference compound.

JAM POLYMER INDUSTRIES DEVELOPMENT

PE-g-MAH

Maleic-Anhydride-Grafted Polyethylene Coupling Agent

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PE-g-MAH	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A reactive PE compatibiliser/coupling platform for mineral-filled HFFR, recycled blends, wood-plastic composites and polar/non-polar interfaces.

Applications: HFFR compounds; Wood-plastic composites; Recycled PE blends and filled PE.

Key features: Reactive compatibilisation; Mineral/fibre coupling target; Low-flow HFFR-compatible variant.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 190°C/2.16 kg	ISO 1133-1	2.0 ± 1.0	g/10 min
Density, 23°C	ISO 1183-1	0.91–0.93	g/cm ³
Melting peak	ISO 11357-3	120 ± 5	°C
Vicat softening temperature, A50	ISO 306	85–105	°C
Total acid functionality / calibrated graft level	Extraction + titration and calibrated FTIR	To be established	mg KOH/g or wt. %
Free MAH / extractables / volatile content	Validated extraction + GC/HPLC	To be established	wt. %
Gel fraction	Validated solvent extraction	To be established	wt. %
Performance in defined HFFR or WPC reference	Controlled compounding + named tests	Minimum gain to be established	
Recommended addition	Compound DOE	1–10	%

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PE from Jam Petrochemical, maleic-anhydride grafting chemistry and stabilisers.

PROCESSING GUIDANCE

Compound with compatible PE using controlled residence time and venting. Dosage depends on filler surface area, moisture and required adhesion/mechanical retention.

QUALIFICATION REQUIREMENTS

MAH graft/residual, flow, DSC/Vicat, moisture sensitivity, odour/volatiles and performance in defined HFFR/WPC references.

JAM POLYMER INDUSTRIES DEVELOPMENT

PE-TIE

MAH-Grafted PE Tie-Layer Platform — Structure-Specific Sub-Grades



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PE-TIE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A tie-layer platform, not one universal adhesive grade. Packaging barrier layers, aluminium laminates and three-layer pipe coatings require different resin rheology, reactivity, layer thickness and qualification methods.

Applications: PE/PA or PE/EVOH structures; Aluminium/PE laminates; Multilayer pipe and sheet.

Key features: Reactive tie-layer functionality; High elongation target; Film/sheet/pipe coextrusion development.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 190°C/2.16 kg	ISO 1133-1	1.5 ± 0.5	g/10 min
Density, 23°C	ISO 1183-1	0.926–0.936	g/cm ³
Tensile stress at yield	ISO 527-2	10–14	MPa
Elongation at break	ISO 527-2	> 600	%
Vicat softening temperature, A50	ISO 306	≥ 95	°C
Moisture content	ISO 15512	≤ 0.10	wt. %
Peel: PE/PA or PE/EVOH structure	Structure, tie thickness, conditioning, angle and speed fixed	To be established	N/cm
Peel: 3-layer PE pipe coating	ISO 21809-1 / agreed coating method	To be established at 23°C and elevated temperature	N/cm

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PE from Jam Petrochemical with controlled MAH grafting and stabilisation.

PROCESSING GUIDANCE

Coextrusion. The target structure, adjacent layers, thickness, temperature, draw ratio and residence time determine adhesion. Each multilayer construction requires peel and ageing qualification.

QUALIFICATION REQUIREMENTS

Graft/residual, MFR, density, moisture, tensile/thermal profile and peel adhesion before/after ageing in each target structure.

JAM POLYMER INDUSTRIES DEVELOPMENT

HFFR-JKT-DEV

Halogen-Free Flame-Retardant Cable Jacket — R&D Platform



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	HFFR-JKT-DEV	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

An internal HFFR cable-jacket R&D platform. It must not be labelled LSZH or certified from compound LOI/mechanical data; flame spread and smoke are properties of the complete cable construction.

Applications: Fibre-optic cable jacket; Building and transit cable sheath; Industrial control cable.

Key features: Halogen-free formulation target; High oxygen-index target; Low-smoke development platform.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Melt flow rate, 190°C/2.16 kg	ISO 1133-1	0.4–1.0	g/10 min
Density	ISO 1183-1	1.60–1.68	g/cm ³
Tensile strength	IEC 60811-501 / agreed cable standard	≥ 10	MPa
Elongation at break	IEC 60811-501 / agreed cable standard	≥ 125	%
Hardness	ISO 868	54–60	Shore D
Brittleness temperature	ASTM D746	≤ -25	°C
Oxygen index	ISO 4589-2	≥ 40	%
Technical note: LOI does not predict cable flame performance.			
Single/bunched cable flame propagation	IEC 60332 series; complete cable	To named cable requirement	
Smoke density	IEC 61034-2; complete cable	To named cable requirement	
Halogen acid gas / acidity / conductivity	IEC 60754-1 and IEC 60754-2	To named cable requirement	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

A formulation-specific PE/EVA or other polyolefin matrix, high-purity ATH/MDH-type mineral system, compatibiliser, process aid and stabilisers. Jam PE may be one component; EVA/POE and speciality additives are externally sourced unless separately available.

PROCESSING GUIDANCE

Low-shear cable extrusion with strict moisture control. Mineral package, temperature profile, screen pack and draw-down must be developed below decomposition onset. Use only after full cable-construction testing.

QUALIFICATION REQUIREMENTS

Full IEC/EN/UL cable-system tests: mechanics/ageing, hot pressure, shrinkage, LOI, flame, smoke density, acid gas/halogen, conductivity and water ageing.

JAM POLYMER INDUSTRIES DEVELOPMENT

SI-XLPE-LV-DEV

Silane-Crosslinkable PE for LV Cable — R&D Platform



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	SI-XLPE-LV-DEV	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

An internal silane-XLPE R&D platform. The cited 95/5 Visico/Ambicat benchmark is a proprietary matched system and cannot be transferred as the mixing ratio or performance of a Jam-resin-based formulation.

Applications: LV power-cable insulation; Building wire insulation; Selected industrial wire.

Key features: Two-component 95/5 concept; Moisture-cure crosslinking; Natural and black development variants.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Base/catalyst ratio	Validated formulation and gravimetry	No universal ratio; 95/5 is benchmark-system specific	
Density of mixed system	ISO 1183-1	Benchmark ≈ 0.923; JPI target TBD	g/cm³
Melt flow rate, base, 190°C/2.16 kg	ISO 1133-1	Benchmark ≈ 1.0; JPI target TBD	g/10 min
Tensile strength after cure	IEC 60811-501	To applicable cable standard	MPa
Elongation after cure/ageing	IEC 60811-501 / 401	To applicable cable standard	%
Hot-set elongation / permanent set	IEC 60811-507	To applicable cable standard	%
Gel content after cure	ASTM D2765 or validated IEC/customer method	To be correlated with hot set	%
Scorch / shelf stability / extrusion surface	Validated cable-line protocol	To be established	
Electrical properties	Named IEC cable standard	To applicable cable standard	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

A technically selected route is required first: vinyl-silane copolymer, Sioplas grafting of a qualified PE, or another licensed process. Jam PE may only be screened after molecular architecture, peroxide/grafting response, scorch and cable electrical performance are demonstrated.

PROCESSING GUIDANCE

Do not copy the benchmark drying instruction. Some matched catalyst masterbatches contain a drying agent and must not be pre-dried, while other systems require strict moisture management. Storage, opening time, drying prohibition/requirement, extrusion profile and cure schedule must be validated for the actual formulation.

QUALIFICATION REQUIREMENTS

Graft and catalyst control, scorch/shelf stability, extrusion surface, cure kinetics, gel, hot set, ageing, shrinkback and complete electrical/cable-standard testing.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-ESD

Permanent Static-Dissipative Polypropylene Compound



Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-ESD	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A candidate permanent static-dissipative PP platform. 'Permanent' and 'humidity-independent' claims require resistance stability after conditioning, ageing, cleaning and multiple lots; they cannot be inferred from additive type.

Applications: Electronics handling trays; ESD bins and housings; Industrial packaging.

Key features: Permanent ESD target; Humidity-independent option; Colourable grades subject to system choice.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Surface resistance, conditioned plaque	IEC 61340-2-3; electrode/voltage/conditioning fixed	$1 \times 10^6 - 1 \times 10^9$	Ω
Static decay	IEC 61340-2-1 or named customer method	To be established with exact setup	s
Density	ISO 1183-1	Defined by conductive technology	g/cm ³
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	Defined by process sub-grade	g/10 min
Mechanical/thermal profile	ISO 527-2 / ISO 178 / ISO 179	To be established by sub-grade	
Resistance after humidity, heat ageing and cleaning	Defined ageing/cleaning protocol	Within approved ESD band	Ω

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain with a permanent conductive-polymer or engineered conductive additive system.

PROCESSING GUIDANCE

Injection/extrusion conditions depend on the conductive system. Avoid uncontrolled regrind, excessive shear and incompatible colour/additive packages. Measure resistance after defined conditioning.

QUALIFICATION REQUIREMENTS

Resistance distribution, humidity/temperature/ageing stability, static decay, mechanical/thermal performance, cleanliness and ESD-system qualification. No ATEX claim without certification.

JAM POLYMER INDUSTRIES DEVELOPMENT

PP-CONDUCTIVE

Electrically Conductive Polypropylene Compound

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	PP-CONDUCTIVE	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A conductive reinforced PP development grade for groundable components. Conductivity does not by itself establish EMI shielding, ATEX compliance or part grounding safety; each requires separate part-level verification.

Applications: Groundable housings; Conductive trays and fixtures; Industrial/electronic components.

Key features: Low surface-resistance target; High stiffness option; Injection-moulding development grade.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Surface resistance, conditioned plaque	IEC 61340-2-3; setup fixed	$1 \times 10^2 - 1 \times 10^4$	Ω
Melt volume-flow rate, 230°C/2.16 kg	ISO 1133-1	0.2–0.5	cm ³ /10 min
Melt volume-flow rate, 230°C/10 kg	ISO 1133-1	30–40	cm ³ /10 min
Density	ISO 1183-1	1.08–1.14	g/cm ³
Tensile strength, 23°C	ISO 527-2	60–75	MPa
Flexural modulus, 23°C	ISO 178	4,000–5,500	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	≥ 7	kJ/m ²
HDT, 1.80 MPa	ISO 75-2	≥ 120	°C
Electrical stability after moulding/ageing	Defined orientation and ageing protocol	Within approved conductive band	Ω

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Selected PP from the Jam value chain with engineered carbon/conductive reinforcement and coupling/stabiliser package.

PROCESSING GUIDANCE

Injection moulding. Indicative melt window 240–270°C and mould 40–70°C for a reinforced system; final settings are formulation-specific. Conductive networks are sensitive to shear and orientation.

QUALIFICATION REQUIREMENTS

Resistance distribution and ageing, mechanical/thermal profile, anisotropy, moulding-window sensitivity, grounding/EMI performance and application certification. No ATEX claim without certification.

JAM POLYMER INDUSTRIES DEVELOPMENT

rPP-TD20**20% Mineral-Filled Recycled-Content PP Compound**

Document status	INTERNAL DEVELOPMENT SPECIFICATION	Revision / issue date	REV 0.3 / 2026-07-21
Product code	rPP-TD20	Document owner	Technical and R&D Department

PRODUCT DESCRIPTION

A controlled recycled-content PP compound platform for non-safety durable parts. Recycled-content claims require verified feedstock traceability and mass balance.

Applications: Automotive non-safety trim; Appliance/industrial housings; Pallets, crates and durable goods.

Key features: 50% recycled-content target; Controlled mineral loading; Lot-to-lot QC and odour/VOC development.

PRELIMINARY TECHNICAL PROPERTIES

Property / condition	Test method	Provisional value	Unit
Physically incorporated PCR content	Verified BOM + supplier chain-of-custody evidence	≥ 50	wt.% of final compound
Inorganic residue (mineral-correlated)	ISO 3451-1; validated formulation mass balance	20 ± 2	wt. %
Melt flow rate, 230°C/2.16 kg	ISO 1133-1	5 ± 2	g/10 min
Density	ISO 1183-1	1.06–1.10	g/cm ³
Tensile stress at yield	ISO 527-2	≥ 25	MPa
Flexural modulus	ISO 178	$\geq 2,000$	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	≥ 3	kJ/m ²
Odour / VOC / contamination / restricted substances	Named customer + screening protocol	To be established	

The values shown are preliminary development targets. Test specimen preparation, conditioning and test procedure shall follow the cited method and the approved internal laboratory instruction.

MATERIAL SYSTEM

Documented post-consumer recycled PP physically incorporated at the declared level, optional qualified Jam-value-chain PP for property adjustment, controlled mineral filler, compatibiliser and stabilisers. PIR must be a separate grade/claim.

PROCESSING GUIDANCE

Injection moulding. Establish a controlled incoming-PCR specification and blend homogenisation protocol. Colour, odour, contamination and mechanical variability require tightened lot release.

QUALIFICATION REQUIREMENTS

Do not mix PCR and PIR under one 50% claim, and do not call a book-entry mass-balance claim physically recycled content. Verify incoming contamination, polymer identity, ash, MFR, colour, odour/VOC, restricted substances and lot variability.