



JAM POLYMER INDUSTRIES DEVELOPMENT

CONTROLLED ENGINEERING DOCUMENTATION

TECHNICAL PRODUCT PORTFOLIO

25 CONTROLLED PRODUCT DATA SHEETS

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HFFR-JKT-DEV

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

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-HFFR-JKT-DEV
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	%
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	

QUALIFICATION & USE

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MB-AO

Antioxidant Masterbatch Platform – PE and PP Sub-Grades Required

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-AO
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	

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MB-BK40-PE

40% Carbon-Black Masterbatch – PE Carrier

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-BK40-PE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	%

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MB-BK40-PP

40% Carbon-Black Masterbatch – PP Carrier

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-BK40-PP
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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·cm²/g
Dispersion / colour strength	Defined PP let-down protocol	To be established	
Recommended let-down ratio	End-use trial	To be established	%

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MB-SLIP-AB-PE

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

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-SLIP-AB-PE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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

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MB-UV-PE

UV-Stabiliser Masterbatch – PE Carrier

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-UV-PE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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 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 ■ 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	

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MB-UV-PP

UV-Stabiliser Masterbatch – PP Carrier

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-UV-PP
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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 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 ■ Pigment, section, climate ■ and lifetime dependent		
Weathering retention	ISO 4892-2/-3 or named application ■ method ■ To be established in final ■ formulation		

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MB-W70-PE

70% Titanium-Dioxide White Masterbatch – PE Carrier

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-MB-W70-PE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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 TiO2	
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·cm²/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	%

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PE-JKT-BK

Black Polyethylene Cable-Jacketing Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PE-JKT-BK
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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. %

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PE-RM-UV

UV-Stabilised Polyethylene for Rotomoulding

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PE-RM-UV
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	

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PE-TIE

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

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PE-TIE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	To be established at 23°C and elevated temperature	

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PE-g-MAH

Maleic-Anhydride-Grafted Polyethylene Coupling Agent

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PE-g-MAH
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	%

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PP-CONDUCTIVE

Electrically Conductive Polypropylene Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-CONDUCTIVE
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	1×10 ² -1×10 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

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PP-ESD

Permanent Static-Dissipative Polypropylene
Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-ESD
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	1×10 ⁶ -1×10 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

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PP-GF20

20% Glass-Fibre Reinforced Polypropylene

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-GF20
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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. %
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	%

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PP-GF30

30% Glass-Fibre Reinforced Polypropylene

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-GF30
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	%

QUALIFICATION & USE

- Values are development targets, not a sales specification or certificate of analysis.
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PP-GF40

40% Glass-Fibre Reinforced Polypropylene

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-GF40
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	%

QUALIFICATION & USE

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PP-TD20

20% Talc-Filled Polypropylene Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-TD20
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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. %
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	%

QUALIFICATION & USE

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PP-TD30

30% Talc-Filled Polypropylene Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-TD30
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	%

QUALIFICATION & USE

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- Regulatory, food-contact, medical, UL, IEC, ATEX or OEM compliance applies only when confirmed in a grade-specific document.



PP-TD40

40% Talc-Filled Polypropylene Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-TD40
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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	%

QUALIFICATION & USE

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PP-g-MAH

Maleic-Anhydride-Grafted Polypropylene Coupling Agent

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-PP-g-MAH
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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 testing	Minimum gain to be established	
Recommended addition	Compound DOE	1-5	%

QUALIFICATION & USE

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SI-XLPE-LV-DEV

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

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-SI-XLPE-LV-DEV
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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 gNo 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	

QUALIFICATION & USE

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TPO-E20UV

Automotive Exterior TPO – 20% Mineral, UV
Stabilised

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-TPO-E20UV
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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	

QUALIFICATION & USE

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- Final limits require independent production-lot validation using the cited methods and controlled specimen preparation.
- Regulatory, food-contact, medical, UL, IEC, ATEX or OEM compliance applies only when confirmed in a grade-specific document.



TPO-I20

Automotive Interior TPO – 20% Mineral Filled

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-TPO-I20
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
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/m²
Notched Charpy impact, -30°C	ISO 179-1/1eA	2-5	kJ/m²
HDT, 0.45 MPa, unannealed	ISO 75-2	95-105	°C
Odour / VOC / fogging / scratch	Named OEM or customer method	To customer limit	

QUALIFICATION & USE

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rPP-TD20

20% Mineral-Filled Recycled-Content PP Compound

PRELIMINARY ENGINEERING DATA

DOCUMENT ID JPI-TDS-rPP-TD20
ISSUE DATE 2026-07-22

OWNER TECHNICAL & R&D
STATUS CONTROLLED DEVELOPMENT DATA

PRODUCT OVERVIEW

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/cm³
Tensile stress at yield	ISO 527-2	≥ 25	MPa
Flexural modulus	ISO 178	≥ 2,000	MPa
Notched Charpy impact, 23°C	ISO 179-1/1eA	≥ 3	kJ/m²
Odour / VOC / contamination / restricted substances	Named customer + screening protocol	To be established	

QUALIFICATION & USE

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