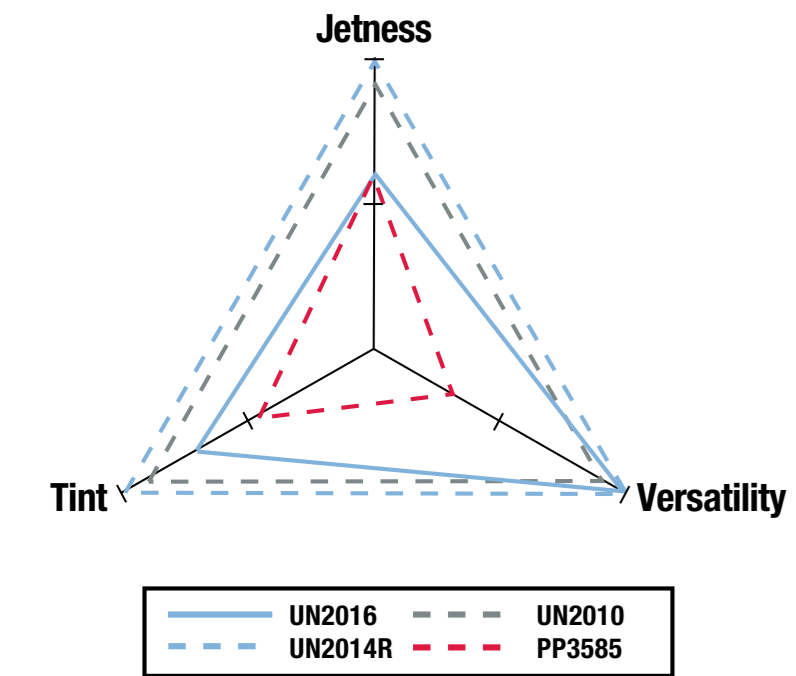
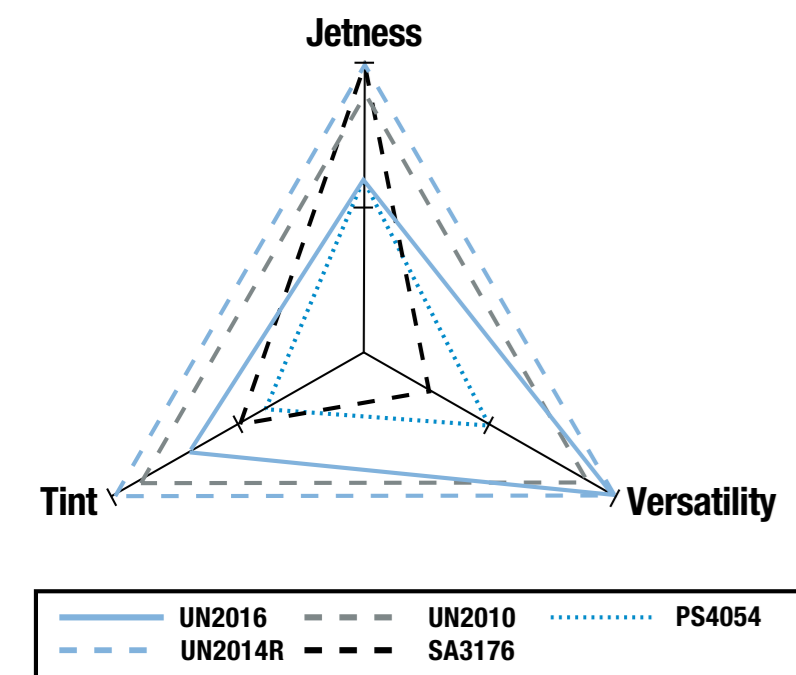


For compounding or recycling applications, the key selection factors are tint, versatility and jetness. Cabot's recommended masterbatches for compounding and recycling are compared as follows. Performance improves from chart centre:

■ **PP compatible grades**



■ **Styrenic compatible grades**



die when a fixed pressure is applied to the melt via a piston at a given load and a certain temperature. Further details can be found in the Cabot brochure "Melt Flow Index".

Versatility: the higher the versatility, the more polymer systems the masterbatch can be diluted in.

Tinting strength: the ability of the black masterbatch to reduce the amount of light reflected so masking any colour given by the processor's polymer resin e.g. coloured recyclate. The tinting strength of a black masterbatch can typically be measured from the reflectance of a grey compound after mixing with a white pigment. Typically the L* value of the grey compound is measured within the CIELAB co-ordinates.

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MASTERBATCHES



Masterbatches for Moulding, Extrusion, Compounding and Recycling



■ **Explanatory Notes**

Jetness (or masstone): the absorbance of the total visible light by the black coloured moulded plastic part. This can be measured by the L* value within the CIELAB co-ordinates: the more jet the product, the lower the L* value. More details can be found in the Cabot brochure "Color Measurement for Carbon Black Filled Plastics".

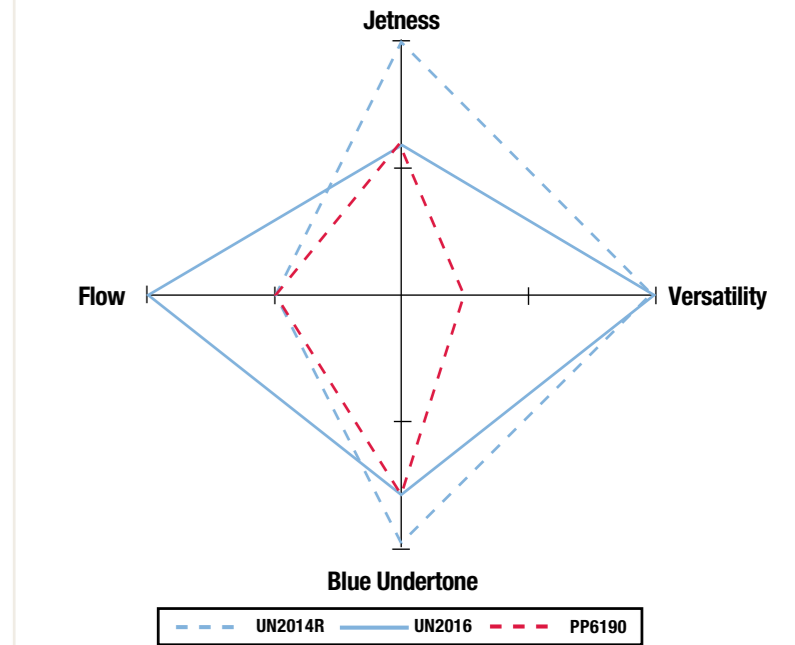
Undertone: the blueness/yellowness of the moulded part measured within the CIELAB co-ordinates. A negative b* value indicates a blue undertone: the more negative the value, the bluer the undertone. More details can be found in the Cabot brochure "Color Measurement for Carbon Black Filled Plastics".

Flow: generally measured by the MFI (melt flow index). MFI is the output rate in grams that occurs in 10 minutes through a standard

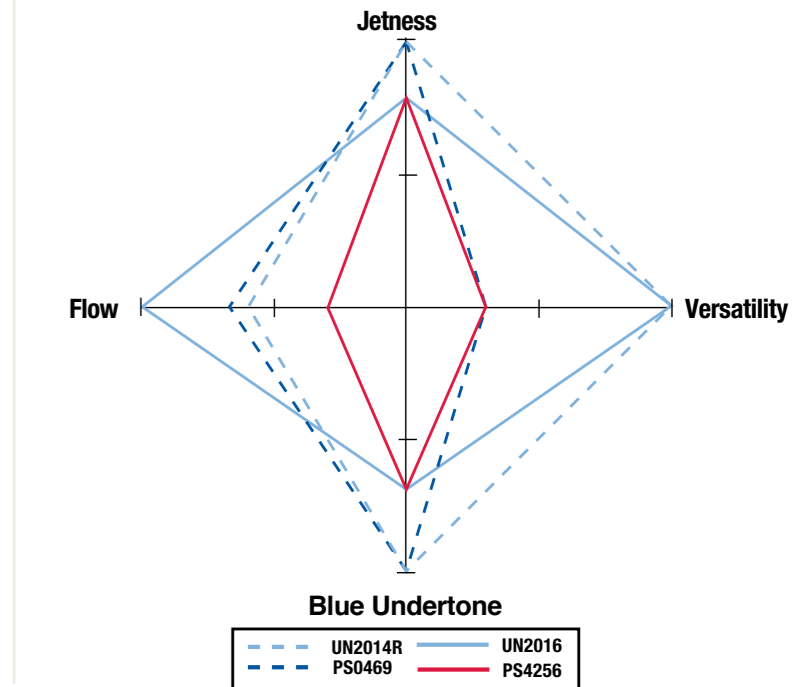
Masterbatches for Moulding, Extrusion, Compounding and Recycling

Key selection factors to consider when choosing a masterbatch for moulding or extrusion are: jetness, undertone, flow and versatility. Cabot's recommended masterbatches for moulding/sheet extrusion are compared as follows. Performance improves from chart centre:

■ **PP compatible grades**



■ **Styrenic compatible grades**



Masterbatches for Moulding, Extrusion, Compounding and Recycling

Masterbatches for Moulding					INJECTION MOULDING									
Grade	%	Purpose	Typical Addition Level (%)	Typical MFI (g/10 min)	MFI Conditions	Description	Compatibility							
							LDPE	LLDPE	HDPE	PP	PS	Other		
Black	EG3807	35	Jet Black	2 to 4	6.5	200°C/21.6 kg	High performance jet black masterbatch for engineering polymers	Y	Y	Y	Y	Y	Engineering/ABS/SAN	
	EV1755	50	General Purpose Colour	1 to 3	6	190°C/10.0 kg	General purpose colour universal masterbatch	Y	Y	Y	Y	Y	Y	
	PE2727	40	Medium Colour/Weathering	1 to 3	41	190°C/21.6 kg	Premium masterbatch for PE weathering applications	Y	Y	Y	Y	Y	Y	
	PE2813	25	Medium colour/FDA approval	1 to 3	11	190°C/10.0 kg	Masterbatch complying with the purity requirements prescribed by the FDA 21 CFR 178.3297	Y	Y	Y	Y	Y	PA6/6.6/filled	
	PA3785	30	Jet Black	1 to 3	7.5	250°C/5.0 kg	Specific masterbatch for polyamide	Y	Y	Y	Y	Y	Y	
	PE4884	n.a.	Medium Colour	2 to 4	5	190°C/10.0 kg	Economy masterbatch for polyolefins	Y	Y	Y	Y	Y	Y	
	PF6190	35	Medium Colour/Weathering	7	9	230°C/5.0kg	Premium masterbatch for PP weathering applications	Y	Y	Y	Y	Y	Y	
	PS4054	40	Medium Colour	1 to 3	4	200°C/5.0 kg	High pigmentation masterbatch for PS	Y	Y	Y	Y	Y	Y	
	PS4256	n.a.	Medium Colour	2 to 4	38	200°C/10.0 kg	Economy masterbatch for PS	Y	Y	Y	Y	Y	Y	
	SA3176	30	Jet Black	2 to 4	54	230°C/21.6 kg	Jet black masterbatch for ABS and SAN	Y	Y	Y	Y	Y	ABS/SAN	
	UN2014R	50	Jet Black	1 to 2	27	190°C/21.6 kg	Premium jet black universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC	
	UN2016	50	Medium Colour	1 to 2	41	190°C/10.0 kg	Medium colour universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC	
	PE7000	50		1 to 2	15	190°C/2.16 kg	Economy masterbatch	Y	Y	Y	Y	Y	Y	
	PE7024	60		1 to 2	16	190°C/2.16 kg	Premium pigmentation masterbatch	Y	Y	Y	Y	Y	Y	
	PE7250	70		1 to 2	45	190°C/2.16 kg	Premium masterbatch for outstanding pigmentation	Y	Y	Y	Y	Y	Y	
	PP7427	38		2 to 4	18	190°C/2.16 kg	Utility cost effective masterbatch	Y	Y	Y	Y	Y	Y	
PP7609	55		2 to 4	15	200°C/21.6 kg	Premium pigmentation masterbatch for PP	Y	Y	Y	Y	Y	Y		
PS7028	60		1 to 2	46	200°C/5.0 kg	Premium pigmentation masterbatch for PS	Y	Y	Y	Y	Y	Y		
PE7002	75		1 to 2	12	190°C/2.16 kg	Universal high pigmentation masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC		
PE9041	8	Mould release	1 to 2	15	190°C/2.16 kg	Mould release masterbatch	Y	Y	Y	Y	Y	Y		
PE9247	10	Thermal stabiliser	1 to 3	38	190°C/2.16 kg	Antioxidant masterbatch with emphasis on long-term thermal stabilisation	Y	Y	Y	Y	Y	Y		
Black	PE2272R	50	General Purpose Colour	3	12	190°C/10.0 kg	Standard masterbatch for thin-walled containers	Y	Y	Y	Y	Y	Y	
	PE2727	40	Medium Colour/Weathering	2	41	190°C/21.6 kg	Premium weathering masterbatch	Y	Y	Y	Y	Y	Y	
	PE4884	n.a.	Medium Colour	2 to 3	5	190°C/10.0 kg	For non-demanding applications	Y	Y	Y	Y	Y	Y	
	PE7000	50		2 to 4	15	190°C/2.16 kg	Economy masterbatch for polyolefins	Y	Y	Y	Y	Y	Y	
	PE7024	60		2 to 4	16	190°C/2.16 kg	Premium pigmentation masterbatch for polyolefins	Y	Y	Y	Y	Y	Y	
PE7250	70		1 to 3	45	190°C/2.16 kg	Premium masterbatch for outstanding pigmentation	Y	Y	Y	Y	Y	Y		
Additive	LL8964	2	Process aid	1 to 2	3	190°C/2.16 kg	Processing aid masterbatch	Y	Y	Y	Y	Y	Y	
	LL9917	n.a.	Process aid	0.75 to 1.5	3	190°C/2.16kg	High performance processing aid masterbatch	Y	Y	Y	Y	Y	Y	
Black	EV1755	50	General Purpose Colour	2 to 5	6	190°C/10.0 kg	General purpose colour universal masterbatch	Y	Y	Y	Y	Y	PA6/6.6/filled	
	PA3785	30	Jet Black	1 to 3	7.5	250°C/5.0 kg	Specific masterbatch for polyamide	Y	Y	Y	Y	Y	Y	
	PE4462	n.a.	Medium Colour	2 to 5	16	190°C/10.0 kg	Economy masterbatch	Y	Y	Y	Y	Y	Y	
	PE4884	n.a.	Medium Colour	2 to 4	5	190°C/10.0 kg	Utility cost effective masterbatch	Y	Y	Y	Y	Y	Y	
	PF6190	35	Medium Colour	2 to 7	9	230°C/5.0 kg	Weathering masterbatch for tapes and netting	Y	Y	Y	Y	Y	Y	
	PS4054	40	Medium Colour/Weathering	1 to 3	6	200°C/5.0 kg	Premium masterbatch for PS	Y	Y	Y	Y	Y	Y	
	PS4256	n.a.	Medium Colour/Weathering	2 to 6	38	200°C/10.0 kg	Economy masterbatch for PS	Y	Y	Y	Y	Y	Y	
	SA3176	30	Jet Black	2 to 3	54	230°C/21.6 kg	Jet black masterbatch for ABS and SAN	Y	Y	Y	Y	Y	ABS/SAN	
	UN2014R	50	Jet Black	1 to 2	27	190°C/21.6 kg	Premium jet black universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC	
	UN2016	50	Medium Colour	1 to 2	41	190°C/10.0 kg	Medium colour universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC	
	PE7002	75		1 to 2	12	190°C/2.16 kg	High pigmentation masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC	
	Additive	PE9247	10	Thermal stabiliser	0.5 to 2	38	190°C/2.16 kg	Antioxidant masterbatch	Y	Y	Y	Y	Y	Y
	PE8999	40	Desiccant	1 to 4	16	190°C/2.16 kg	Desiccant masterbatch	Y	Y	Y	Y	Y	Y	
Black	PE2727	40	General Purpose	5 to 7	41	190°C/21.6 kg	Premium weathering masterbatch	Y	Y	Y	Y	Y	Y	
	PE1873	40	General Purpose	5 to 7	41	190°C/21.6 kg	Masterbatch for specified carbon black content	Y	Y	Y	Y	Y	Y	
	PE4462	n.a.	General Purpose	5 to 7	16	190°C/10.0 kg	Economy masterbatch	Y	Y	Y	Y	Y	Y	
	PE2668	40	Weathering	6.25	4	190°C/21.6 kg	Fully formulated weathering masterbatch	Y	Y	Y	Y	Y	Y	
	LL4932R	50	Medium Colour	5	12	190°C/10.0 kg	Masterbatch for specified carbon black content	Y	Y	Y	Y	Y	Y	
LL6055	50	Medium Colour	4 to 5	39	190°C/21.6 kg	For thin-walled drip irrigation tubing containing recycleate	Y	Y	Y	Y	Y	Y		
Additive	LL8964	2	Process aid	1 to 2	3	190°C/2.16 kg	Process aid masterbatch	Y	Y	Y	Y	Y	Y	
	LL9917	n.a.	Process aid	0.75 to 1.5	3	190°C/2.16 kg	High performance process aid masterbatch	Y	Y	Y	Y	Y	Y	
	PE9247	10	Thermal stabiliser	0.5 to 2	38	190°C/2.16 kg	Antioxidant masterbatch	Y	Y	Y	Y	Y	Y	
Black	LL2590R	40	Weathering	6.25	6	190°C/21.6 kg	Fully formulated weathering masterbatch	Y	Y	Y	Y	Y	PE copo	
	PE1371	40	Weathering	6.25	17	190°C/21.6 kg	Standard weathering masterbatch	Y	Y	Y	Y	Y	PE copo	
Black	PE2272R	50	General Purpose	1 to 2	12	190°C/10.0 kg	General purpose masterbatch	Y	Y	Y	Y	Y	Y	
	PF6190	30	Medium Colour	2 to 7	9	230°C/5.0 kg	Weathering masterbatch for tapes and netting	Y	Y	Y	Y	Y	Y	
	PE2648	n.a.	Medium Colour	2 to 5	9	190°C/10.0 kg	Standard pigmentation masterbatch	Y	Y	Y	Y	Y	Y	
	PE2727	40	Weathering	4 to 6	41	190°C/21.6 kg	Weathering masterbatch for tapes and netting	Y	Y	Y	Y	Y	Y	
Masterbatches for Wire and Cable													PVC/PE copo	
EV1755	50	Colouration	1 to 4	6	190°C/10.0 kg	Economy colouring masterbatch	Y	Y	Y	Y	Y	PE copo		
LL2590R	40	Weathering	6.25	6	190°C/21.6 kg	Fully formulated weathering masterbatch	Y	Y	Y	Y	Y	PE copo		
PE1371	40	Weathering	6.25	17	190°C/21.6 kg	Standard weathering masterbatch	Y	Y	Y	Y	Y	PE copo		
UN2010	50	Medium Colour	1 to 2	20	190°C/21.6 kg	Standard masterbatch for PVC cable	Y	Y	Y	Y	Y	PVC/PE copo		
UN2014R	50	Jet Black	0.5 to 1	27	190°C/21.6 kg	High colouration black masterbatch for PVC cable	Y	Y	Y	Y	Y	PVC/PE copo		
UN2016	50	Medium Colour	0.5 to 1	41	190°C/10.0 kg	Medium colouration black masterbatch for PVC cable	Y	Y	Y	Y	Y	PVC/PE copo		
Additive	PE9247	10	Thermal stabiliser	1 to 3	38	190°C/2.16 kg	Phenolic antioxidant masterbatch	Y	Y	Y	Y	Y	PE copo	
	LL8964	2	Process aid	1 to 2	3	190°C/2.16 kg	Process aid masterbatch	Y	Y	Y	Y	Y	Y	
	LL9917	n.a.	Process aid	0.75 to 1.5	3	190°C/2.16 kg	High performance process aid masterbatch	Y	Y	Y	Y	Y	Y	
Masterbatches for Sheet and Thermoforming														
Black	PE2648	n.a.	Medium Colour	2 to 5	9	190°C/10.0 kg	Economy pigmentation masterbatch for polyolefins	Y	Y	Y	Y	Y	Y	
	PE4462	n.a.	Medium Colour	2 to 5	16	190°C/10.0 kg	Economical alternative to PE2648	Y	Y	Y	Y	Y	Y	
	PE2824	n.a.	Medium Colour	1 to 4	37	190°C/21.6 kg	Standard pigmentation masterbatch for polyolefins	Y	Y	Y	Y	Y	Y	
	PF6190	35	Weathering	2 to 7	9	230°C/5.0kg	Premium weathering masterbatch for PP	Y	Y	Y	Y	Y	Y	
	PS4054	40	Medium Colour	1 to 4	4	200°C/5.0 kg	High pigmentation masterbatch for PS	Y	Y	Y	Y	Y	Y	
PS4256	n.a.	Medium Colour	2 to 6	38	200°C/10.0 kg	Economy masterbatch for PS	Y	Y	Y	Y	Y	Y		
UN2014R	50	Jet Black	1 to 2	27	190°C/21.6 kg	Premium jet black universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC		
UN2016	50	Medium Colour	1 to 2	41	190°C/10.0 kg	Medium colour universal masterbatch	Y	Y	Y	Y	Y	ABS/SAN/PVC		
Additive	PE7002	75		2 to 4	13	190°C/2.16 kg	High pigmentation masterbatch	Y	Y	Y	Y	Y	Y	
	PP7609	55		3 to 6	15	230°C/2.16 kg	Premium pigmentation masterbatch for PP	Y	Y	Y	Y	Y	Y	
	PS7028	60		2 to 5	46	200°C/5.0 kg	Premium pigmentation masterbatch for PS	Y	Y	Y	Y	Y	Y	
Black	PE2272R	50	Weathering	5	12	190°C/10.0 kg	General purpose masterbatch	Y	Y	Y	Y	Y	Y	
	PE2642	40	Weathering	5 to 7	14	190°C/21.6 kg	Premium weathering masterbatch	Y	Y	Y	Y	Y	Y	
	LL4752	40	Weathering	5 to 7	49	190°C/21.6 kg	Premium weathering masterbatch	Y	Y	Y	Y	Y	Y	
	PF6190	35	Weathering	2 to 7	9	230°C/5.0 kg	Premium weathering masterbatch for PP	Y	Y	Y	Y	Y	Y	
GEOSYNTHETICS														

* Engineering= PC, PA, PBT, PMMA, POM, PPS