



COLLOIDS

THE MAKERS OF MASTERBATCH

**FOR ELECTRONICS AND
ELECTRICAL APPLICATIONS**

MASTERBATCH FOR ELECTRONICS AND ELECTRICAL APPLICATIONS

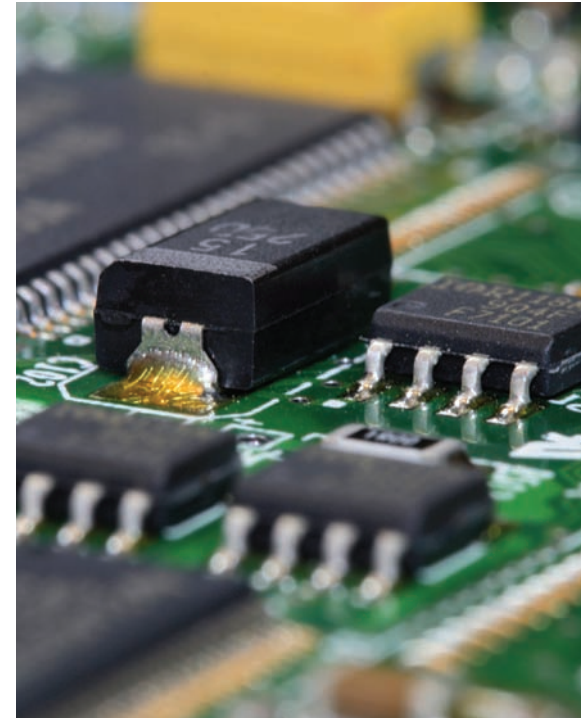
Working in conjunction with OEMs, polymer suppliers and processors Colloids has the ability to offer highly specialised product solutions for electronic/electrical applications. From the conceptual phase of a project through to full commercialisation we work closely with our customers, often designing customised formulations based on specific requirements.

Our well equipped analytical and colour laboratories allow us to assess product performance against industry standards, for example flame retardancy and electrical conductivity.

Our range includes the following, available as either standard or fully customised grades:

- **PACE**® engineering polymer specific masterbatches
- **E-TEC**® conductive, dissipative and antistatic compounds
- Colour and Additive masterbatches

All our products comply with the Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) directives.



Contents

This document contains information about a selection of products which are regarded as the most popular Masterbatches for Electronics and Electrical Applications.

Simply click on the title of the Masterbatch you would like more information on.

Other grades are available on request and technical data sheets are available for all our products. For more information please contact the Colloids Sales Team on +44 (0) 151 546 9222.

PLEASE NOTE: The product information contained within this pdf is based on our general experience and does not constitute a specification. Since many factors affect the use of our products, no warranty is given or implied with respect to this information or patent infringement. We do not accept liability for any loss or damage arising from the use of this information. All sales are subject to our standard terms and conditions of sale.

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***Colour indication only:**

If an accurate match is required customer should always trial material in their own polymer base – samples available on request. Evaluation on colour to RAL and Pantone® reference is based on Masterbatch let down in LDPE at 2%.

****Heat Stability:** Maximum recommended processing temperature.

***** Light fastness of pigments:** Scale 1-8 assessed using "Blue Wool Scale", 8 denotes highest performance i.e. best resistance to fading.

****** Weather fastness of pigments:** 1-5 assessed using "International Gray Scale" 5 denotes highest performance i.e. lowest fading outdoors. Ratings 3 and below are not recommended for long-term outdoor use. Light and weather fastness relate to pigment performance only and rely on the appropriate polymer stabilisation system to be present. All declarations relating to heat stability, light fastness and weather fastness are based on a Masterbatch addition rate of 5% in LDPE .

*******Food contact:** 'Tick' means that the Masterbatch is generally accepted for food packaging application in most countries. For specific details please contact the Colloids sales office

*******EC 94/62:** 'Tick' means that the Masterbatch conforms to the new EC Packaging Directive which controls heavy metal content.



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Symbol Reference Guide

✓ = Suitable, * = Partial suitability, ✗ = Not suitable

Bespoke products

For non standard applications Colloids can offer a rapid colour matching and formulation development service creating masterbatches specific to our customers needs.

Bespoke colours, including blacks and whites, can be engineered to encompass a whole range of effects and finishes for some of today's most demanding markets.

We can also develop and produce coloured and natural products incorporating differing functional properties such as antistatic, UV stability, mould release, antibacterial etc.

Formulations can also be designed to give defined physical performance characteristics using the latest pigment and polymer technologies. This includes special black, white and conductive products.

Our technical team continues to work closely with our customers to develop specific formulations.

This may involve improving product performance or offering solutions for new markets and applications.

Additive products

GRADE	POLYMER BASE	DESCRIPTION	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office						RECOMMENDED USE					COMMENTS
			PE	PP	PS	ABS	PA	PET	EXTRUSION FILM	EXTRUSION – PROFILE / SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUNDING	
CL 4175 PE	PE	PURGING AGENT	NA	NA	NA	NA	NA	NA	✓	✓	✓	✓	✓	Efficient purging agent
FR 0667 LL	PE	FLAME RETARDANT	✓	✓	✗	✗	✗	✗	*	✓	✓	✓	✓	Allows compliance with UL 94 V2 (1.6mm) in CoPP. PBDPO free
FR 1453 PE	PE	FLAME RETARDANT	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Allows compliance with DIN 4102 B1 when used in XLPE foam and French M1. PBDPO free
ST 0860 PE	PE	ANTISTATIC	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Amine free antistatic agent
ST 1028 PS	PS	ANTISTATIC	✗	✗	✓	✓	✗	✗	✓	✓	✓	✓	✓	Highly concentrated for styrenic polymers
UV 2375 PE	PE	UV STABILISER	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Contains polymeric HALS and antioxidant. For long term outdoor use
UV 3598 PE	PE	UV STABILISER	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Higher strength polymeric HALS . For long term outdoor use
UV 8534 HP	PP	UV STABILISER	✗	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	High performance HALS for long term outdoor stability including textile applications
PE 48/10/96	PE	DESICCANT	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Highly loaded for moisture control

Colour products

Yellow Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
YELLOW	PE 48/2/2057F	3945C	1016	✓	✓	*	*	240°C	6/7	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2450F	107C	None	✓	✓	*	*	240°C	6/7	✓	✓	
	PE 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2028F	1225C	1003	✓	✓	*	*	230°C	6	✓	✓	

Orange Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
ORANGE	PE 48/3/1902F	137C	1028	✓	✓	✓	✓	240°C	7	✓	✓	Yellowest shade through to reddest shade heavy metal free oranges
	PE 48/3/1900F	N/A	N/A	✓	✓	✓	✓	230°C	5	✓	✓	
	PE 48/3/1046F	1645C	None	✓	✓	✓	✓	240°C	5	✓	✓	

Red Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
RED	PE 48/4/5909F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Yellowest shade through to bluest shade heavy metal free reds
	PE 48/4/5557F	179C	None	✓	✓	✓	✓	240°C	5/6	✓	✓	
	PE 48/4/5020F	186C	None	✓	✓	✓	✓	240°C	4	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	✓	250°C	6	✓	✓	
	PE 48/4/5505F	187C	3031	✓	✓	✓	✓	240°C	6	✓	✓	
	PE 48/4/5500F	201C	3002	✓	✓	✓	✓	240°C	6	✓	✓	
	PE 48/4/5670F	209C	3004	✓	✓	✓	✓	240°C	6	✓	✓	

Pink Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	✓	270°C	7	✓	✓	Bluest shade through to yellowest shade heavy metal free pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	✓	290°C	7	✓	✓	

Violet Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
VIOLET	PE 48/5/4022F	None	None	✓	✓	✓	✓	240°C	6	✓	✓	

Blue Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
LIGHT BLUE	PE 48/5/4535F	299C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	✓	280°C	8	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	✓	280°C	8	✓	✓	
MID BLUE	PE 48/5/4025F	2945C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free mid blues
	PE 48/5/4021F	None	None	✓	✓	✓	✓	290°C	8	✓	✓	
DARK BLUE	PE 48/5/4020F	2755C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free dark blues
	PE 48/5/4500F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/5/4656F	289C	None	✓	✓	✓	✓	240°C	7	✓	✓	

Turquoise Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
TURQUOISE	PE 48/5/4358F	N/A	N/A	✓	✓	✓	✓	280°C	8	✓	✓	

Green Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
	PE 48/6/3450F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	
	PE 48/6/3012F	355C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	*	230°C	6	✓	✓	

DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	Bluest shade through to yellowest shade heavy metal free dark greens
	PE 48/6/3641F	N/A	N/A	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3510F	356C	None	✓	✓	*	*	230°C	6	✓	✓	
	PE 48/6/3600F	357C	None	✓	✓	*	*	220°C	8	✓	✓	
	PE 48/6/3888F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	

Silver/Gold Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
SILVER	PE 48/7/7030F	877C	9023	✓	✓	✓	✓	300°C	8	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	X	200°C	7	✓	✓	

Beige/Ivory Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
BEIGE	PE 48/2/2097F	None	1001	✓	✓	✓	✓	300°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free beiges
	PE 48/2/1266F	N/A	N/A	✓	✓	✓	✓	250°C	7/8	✓	✓	
IVORY	PE 48/2/9600F	N/A	N/A	✓	✓	✓	✓	300°C	7/8	✓	✓	Greenest shade through to reddest shade heavy metal free ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	✓	300°C	8	✓	✓	

Grey Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
GREY	PE 48/7/8368F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade heavy metal free greys
	PE 48/7/8035F	C. GRAY 7C	7046	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8899F	429C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	✓	300°C	8	✓	✓	

Terracotta/Brown Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
TERRACOTTA	PE 48/8/1340F	174C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID BROWN	PE 48/8/1281F	161C	8011	✓	✓	✓	✓	300°C	8	✓	✓	
DARK BROWN	PE 48/8/1550F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade heavy metal free browns
	PE 48/8/1028F	476C	None	✓	✓	✓	✓	300°C	8	✓	✓	

All Colours

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
YELLOW	PE 48/2/2057F	3945C	1016	✓	✓	*	*	240°C	6/7	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2450F	107C	None	✓	✓	*	*	240°C	6/7	✓	✓	
	PE 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2028F	1225C	1003	✓	✓	*	*	230°C	6	✓	✓	
ORANGE	PE 48/3/1902F	137C	1028	✓	✓	✓	✓	240°C	7	✓	✓	Yellowest shade through to reddest shade heavy metal free oranges
	PE 48/3/1900F	N/A	N/A	✓	✓	*	*	230°C	5	✓	✓	
	PE 48/3/1046F	1645C	None	✓	✓	✓	✓	240°C	5	✓	✓	
RED	PE 48/4/5909F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Yellowest shade through to bluest shade heavy metal free reds
	PE 48/4/5557F	179C	None	✓	✓	✓	✓	240°C	5/6	✓	✓	
	PE 48/4/5020F	186C	None	✓	✓	✓	✓	240°C	4	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	✓	250°C	6	✓	✓	
	PE 48/4/5505F	187C	3031	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/4/5500F	201C	3002	✓	✓	✓	✓	240°C	6	✓	✓	
	PE 48/4/5670F	209C	3004	✓	✓	✓	✓	240°C	6	✓	✓	
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	✓	270°C	7	✓	✓	Bluest shade through to yellowest shade heavy metal free pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	✓	290°C	7	✓	✓	
VIOLET	PE 48/5/4022F	None	None	✓	✓	✓	✓	240°C	6	✓	✓	
LIGHT BLUE	PE 48/5/4535F	299C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	✓	280°C	8	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	✓	280°C	8	✓	✓	
MID BLUE	PE 48/5/4025F	2945C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free mid blues
	PE 48/5/4021F	None	None	✓	✓	✓	✓	290°C	8	✓	✓	
DARK BLUE	PE 48/5/4020F	2755C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free dark blues
	PE 48/5/4500F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/5/4656F	289C	None	✓	✓	✓	✓	240°C	7	✓	✓	
TURQUOISE	PE 48/5/4358F	N/A	N/A	✓	✓	✓	✓	280°C	8	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
	PE 48/6/3450F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	
	PE 48/6/3012F	355C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	*	230°C	6	✓	✓	

DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	Bluest shade through to yellowest shade heavy metal free dark greens
	PE 48/6/3641F	N/A	N/A	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3510F	356C	None	✓	✓	*	*	230°C	6	✓	✓	
	PE 48/6/3600F	357C	None	✓	✓	*	*	220°C	8	✓	✓	
	PE 48/6/3888F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	
SILVER	PE 48/7/7030F	877C	9023	✓	✓	✓	✓	300°C	8	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	X	200°C	7	✓	✓	
BEIGE	PE 48/2/2097F	None	1001	✓	✓	✓	✓	300°C	8	✓	✓	Greenest shade through to reddest shade heavy metal free beiges
	PE 48/2/1266F	N/A	N/A	✓	✓	✓	✓	250°C	7/8	✓	✓	
IVORY	PE 48/2/9600F	N/A	N/A	✓	✓	✓	✓	300°C	7/8	✓	✓	Greenest shade through to reddest shade heavy metal free ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	✓	300°C	8	✓	✓	
GREY	PE 48/7/8368F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade heavy metal free greys
	PE 48/7/8035F	C. GRAY 7C	7046	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8899F	429C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	✓	300°C	8	✓	✓	
TERRACOTTA	PE 48/8/1340F	174C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID BROWN	PE 48/8/1281F	161C	8011	✓	✓	✓	✓	300°C	8	✓	✓	
DARK BROWN	PE 48/8/1550F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade heavy metal free browns
	PE 48/8/1028F	476C	None	✓	✓	✓	✓	300°C	8	✓	✓	

White products

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							PIGMENT LOADING, equivalent to TiO ₂ content	INCLUDES ANTIBLOCK?	RECOMMENDED USE					COMMENTS
		PE	PP	PS	ABS	PA	PET	PVC			EXTRUSION FILM	EXTRUSION - PROFILE / SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUNDING	
PACE® N 54/1/01	PA-6	X	X	X	X	✓	X	X	50%	X	X	✓	✓	X	✓	Polymer specific masterbatch for PA-6 and PA-6,6 applications
PE 48/1/12F	PE	✓	✓	*	X	*	✓	*	60%	X	✓	✓	✓	✓	✓	High quality - ideal for thin gauge film
PE 48/1/15F	PE	✓	✓	*	X	*	✓	*	50%	✓	✓	✓	✓	✓	✓	For medium gauge film with good antiblock properties
PE 48/1/47F	PE	✓	✓	*	X	*	✓	*	75%	X	✓	✓	✓	✓	✓	High quality and high pigment concentration
PE 48/1/49F	PE	✓	✓	*	X	*	✓	*	70%	X	✓	✓	✓	✓	✓	High quality and high pigment concentration
M PE WHITE 13749	PE	✓	✓	*	X	*	✓	*	70%	✓	✓	✓	✓	✓	✓	High quality and high pigment concentration including antiblock
M PS WHITE 12835	PS	X	X	✓	*	X	X	X	50%	X	X	✓	✓	X	✓	High quality white for a variety of applications including EPS
UN 53/1/03	Universal	✓	✓	✓	*	*	✓	*	75%	X	✓	✓	✓	✓	✓	High strength for diverse applications

E-TEC® Conductive compounds

GRADE	POLYMER TYPE	DESCRIPTION	APPLICATIONS					TYPICAL SURFACE RESISTIVITY
			EXTRUSION FILM	EXTRUSION SHEET	EXTRUSION PROFILE	INJECTION MOULDING	BLOW MOULDING	
E-TEC® ABS 11368	ABS	Colourless permanently antistatic compound which can be coloured with Colloids standard masterbatches	X	✓	✓	✓	X	10 ⁹
E-TEC® HD 12491	HDPE	Black conductive compound based on high molecular weight HDPE for blow moulded containers	X	✓	X	X	✓	10 ⁴
E-TEC® PA 4332	Modified PA-6	Black modified polyamide compound with excellent toughness and rigidity	X	X	✓	✓	X	10 ⁴
E-TEC® PC/ABS 13491	Modified PC/ABS	Black conductive compound ideal for thermoforming	X	✓	✓	✓	X	10 ⁵
E-TEC® PE 4329	Modified LDPE	Black conductive compound designed for film extrusion down to 75 microns	✓	✓	✓	✓	X	10 ³
E-TEC® PP 50/CON/2	PP	Black conductive compound offering increased rigidity	X	X	✓	✓	X	10 ³
E-TEC® PP 10542	PP	Black conductive compound ideal for sheet extrusion including twin wall corrugated sheet	X	✓	X	X	X	10 ³
E-TEC® PP 11357	PP	Colourless permanently antistatic compound which can be coloured with Colloids standard masterbatches	X	✓	✓	✓	X	10 ⁹
E-TEC® PP 13579	PP	Black conductive compound offering increased conductivity compared to other PP grades in the E-TEC® range	X	X	✓	✓	X	10 ²
E-TEC® PS 13680	Modified PS	Black conductive compound ideal for thermoforming	X	✓	✓	✓	X	10 ³
E-TEC® PS 13731	Modified PS	Black conductive compound giving good gloss and low shrinkage	X	X	X	✓	X	10 ⁵

PACE® Engineering polymer specific grades

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			COLOURANT / ADDITIVE CONTENT	COLOURANT / ADDITIVE TYPE	FOOD CONTACT APPROVED*	RECOMMENDED USE			OTHER COMMENTS
		PA (Nylon)	PET	PC				COMPOUNDING	EXTRUSION	INJECTION MOULDING	
PACE® N 54/1044	PA-6	✓	X	X	25%	High jet furnace carbon black	✓	✓	✓	✓	Superior quality carbon black masterbatch for colouration and UV stability
PACE® N 54/1033	PA-6	✓	X	X	40%	Black solvent dye	X	✓	✓	✓	Black solvent dye system for improved moulding behaviour and surface properties
PACE® N 54/14	PA-6	✓	X	X	30%	High jet furnace carbon black + Black solvent dye	X	✓	✓	✓	Combination of carbon black and black solvent dye system for combined performance
M PA ADDITIVE 11200	PA blend	✓	X	X	25%	Graphite	X	✓	✓	✓	Friction and wear reducing additive
EL 4303	PA-6	✓	X	X	40%	Molybdenum Disulphide	X	✓	✓	✓	Friction and wear reducing additive
PACE® N 54/1/01	PA-6	✓	X	X	50%	Titanium dioxide	✓	✓	✓	✓	Superior quality rutile titanium dioxide white masterbatch
PACE® BLACK 4357	PC	X	X	✓	30%	High jet furnace carbon black	✓	✓	✓	✓	Highly effective black colouration with the benefits of a polycarbonate carrier
PACE® PT 4778	PET	X	✓	X	30%	Small particle furnace carbon black	✓	✓	✓	✓	Highly effective black colouration with the benefits of a PET carrier