



COLLOIDS

THE MAKERS OF MASTERBATCH



**FOR AGRICULTURAL
APPLICATIONS**



MASTERBATCH FOR AGRICULTURAL APPLICATIONS

In today's highly competitive agricultural market Colloids understands the need to provide high performance, cost effective formulations. We continually work with our customers to produce a fully optimised, market-driven product range.

We have a wide range of masterbatches designed for use in the agricultural industry. Applications include mulch film, silage stretch wrap, greenhouse film and irrigation products.

Mulch film

Products are available to address the key requirements of high opacity, low cost, mechanical strength and defined UV stability.

Silage stretch wrap

Products are available to address the key requirements of mechanical strength, thin gauge extrusion, high opacity, excellent UV stability and minimal effect on cling performance.

Greenhouse film

Products are available to address the key requirements of controlled clarity and heat/light transmission, engineered surface tension properties, chemical resistance, mechanical strength and excellent UV stability.

Irrigation products

Products are available for both pipe and geo-membrane applications to address the key requirements of UV stability, mechanical strength and high speed extrusion.



Contents

This document contains information about a selection of products which are regarded as the most popular Masterbatches for Agricultural 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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Table Reference Information

*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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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.

Symbol Reference Guide

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

Additive products

GRADE	POLYMER BASE	DESCRIPTION	POLYMER COMPATIBILITY For other polymers contact Colloids sales office						RECOMMENDED USE					COMMENTS
			PE	PP	PS	ABS	PA	PET	EXTRUSION FILM	EXTRUSION – PROFILE/ SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUNDING	
AB 2097 PE	PE	ANTIBLOCK	✓	✓	*	✗	*	*	✓	✓	✓	✓	✓	High clarity silica based antiblock and IR filter
AF 2332 PE	PE	ANTIFOG	✓	*	✗	✗	✗	✗	✓	✓	✓	✗	✗	Slow migrating antifog
AP 0170 LD	PE	PROCESS AID	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Prevents die build up and melt fracture
CL 4175 PE	PE	PURGING AGENT	NA	NA	NA	NA	NA	NA	✓	✓	✓	✓	✓	Efficient purging agent
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 4284 PE	PE	UV STABILISER	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	Mixture of HALS and UV absorber – broad spectrum stabiliser
PE 48/10/96	PE	DESICCANT	✓	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	Highly loaded for moisture control

Black products

Speciality Film Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PE 48/92F	PE	✓	*	✓	*	*	*	*	40%	Small particle furnace	✓	X	✓	✓	✓	✓
PE 48/101	PE	✓	*	✓	*	*	*	*	40%	High strength general purpose	✓	X	✓	✓	✓	✓

Speciality Polymer Specific and other Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS, PC/ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PP 50/10	PP	X	X	✓	X	X	X	X	40%	Small particle furnace	✓	X	X	✓	✓	✓

Functional Black Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PE 48/70F	LDPE	✓	*	✓	*	*	*	*	Not disclosed	High strength general purpose	X	✓	✓	✓	✓	✓
M PE BLACK 12751	LDPE	✓	*	✓	*	*	*	*	Not disclosed	Special food contact compliant, high strength	✓	✓	✓	✓	✓	✓
PE 48/72F	LDPE	✓	*	✓	*	*	*	*	50%	Standard general purpose	X	X	✓	✓	✓	✓
M PE BLACK 13553	LDPE	✓	*	✓	*	*	*	*	40%	Special food contact compliant, high strength	✓	X	✓	✓	✓	✓

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 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	

Orange Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY4 **	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

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	✓	✓	

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

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 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/6/3600F	357C	None	✓	✓	*	*	220°C	8	✓	✓	Bluest shade through to yellowest shade heavy metal free dark greens
	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	✓	✓	✓	✓	300°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 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	
ORANGE	PE 48/3/1902F	137C	1028	✓	✓	✓	✓	240°C	7	✓	✓	Yellowest shade through to reddest shade heavy metal free oranges
RED	PE 48/4/5909F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Yellowest shade through to bluest shade heavy metal free reds
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	✓	✓	
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 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	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	✓	✓	

Colour Film Products

Yellow Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
YELLOW	PE 48/2/2905F	3935C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2904F	106C	1018	✓	✓	✓	240°C	7	3/4	✓	✓	

Orange Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
ORANGE	PE 48/3/1902F	150C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Yellowest shade through to reddest shade heavy metal free oranges

Pink Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	270°C	7	3/4	✓	✓	Bluest shade through to yellowest shade heavy metal free pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	290°C	7	3	✓	✓	

Red Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
RED	PE 48/4/5909F	485C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Yellowest shade through to bluest shade heavy metal free reds

Blue Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
BLUE TINT (TRANSPARENT)	PE 48/5/4020F	None	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free blue tints
	PE 48/5/4500F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT BLUE	PE 48/5/4535F	2995C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	280°C	8	5	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	280°C	8	5	✓	✓	
MID BLUE	PE 48/5/4025F	300C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free mid blues
	PE 48/5/4021F	2935C	None	✓	✓	✓	290°C	8	5	✓	✓	
DARK BLUE	PE 48/5/4656F	295C	5013	✓	✓	✓	240°C	7	4	✓	✓	

Turquoise Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
TURQUOISE	PE 48/5/4358F	None	None	✓	✓	✓	280°C	8	5	✓	✓	

Green Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
GREEN TINT (TRANSPARENT)	PE 48/6/3015F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID GREEN	PE 48/6/3116F	355C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
DARK GREEN	PE 48/6/3600F	555C	None	✓	✓	*	220°C	8	4/5	✓	✓	Bluest shade through to yellowest shade heavy metal free dark greens
	PE 48/6/3888F	350C	None	✓	✓	✓	300°C	8	4/5	✓	✓	
	PE 48/6/3373F	553C	6020	✓	✓	*	240°C	7/8	4/5	X	X	

Silver/Gold Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
SILVER	PE 48/7/7030F	877C	9022	✓	✓	✓	300°C	8	5	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	✗	200°C	7	4	✓	✓	

Beige/Ivory Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
BEIGE	PE 48/2/2097F	7506C	None	✓	✓	✓	300°C	8	4/5	✓	✓	Greenest shade through to reddest shade heavy metal free beiges
	PE 48/2/1266F	4655C	None	✓	✓	✓	250°C	7/8	4	✓	✓	
IVORY	PE 48/2/9600F	None	9001	✓	✓	✓	300°C	7/8	4	✓	✓	Greenest shade through to reddest shade heavy metal free ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	300°C	8	4/5	✓	✓	

Grey Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
GREY	PE 48/7/8368F	431C	7024	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade heavy metal free greys
	PE 48/7/8035F	C. GRAY 8C	None	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8899F	C. GRAY 6C	7045	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	300°C	8	5	✓	✓	

Terracotta/Brown Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
TERRACOTTA	PE 48/8/1340F	1675C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID BROWN	PE 48/8/1281F	None	8012	✓	✓	✓	300°C	8	5	✓	✓	
DARK BROWN	PE 48/8/1550F	4975C	None	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade heavy metal free browns
	PE 48/8/1028F	476C	None	✓	✓	✓	300°C	8	5	✓	✓	

All Film Colours

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
YELLOW	PE 48/2/2905F	3935C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Greenest shade through to reddest shade standard heavy metal free yellows
	PE 48/2/2904F	106C	1018	✓	✓	✓	240°C	7	3/4	✓	✓	
ORANGE	PE 48/3/1902F	150C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Yellowest shade through to reddest shade heavy metal free oranges
RED	PE 48/4/5909F	485C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Yellowest shade through to bluest shade heavy metal free reds
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	270°C	7	3/4	✓	✓	Bluest shade through to yellowest shade heavy metal free pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	290°C	7	3	✓	✓	
BLUE TINT (TRANSPARENT)	PE 48/5/4020F	None	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free blue tints
	PE 48/5/4500F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT BLUE	PE 48/5/4535F	2995C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	280°C	8	5	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	280°C	8	5	✓	✓	
MID BLUE	PE 48/5/4025F	300C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade heavy metal free mid blues
	PE 48/5/4021F	2935C	None	✓	✓	✓	290°C	8	5	✓	✓	
DARK BLUE	PE 48/5/4656F	295C	5013	✓	✓	✓	240°C	7	4	✓	✓	
TURQUOISE	PE 48/5/4358F	None	None	✓	✓	✓	280°C	8	5	✓	✓	
GREEN TINT (TRANSPARENT)	PE 48/6/3015F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID GREEN	PE 48/6/3116F	355C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Bluest shade through to yellowest shade heavy metal free mid greens
DARK GREEN	PE 48/6/3600F	555C	None	✓	✓	*	220°C	8	4/5	✓	✓	Bluest shade through to yellowest shade heavy metal free dark greens
	PE 48/6/3888F	350C	None	✓	✓	✓	300°C	8	4/5	✓	✓	
	PE 48/6/3373F	553C	6020	✓	✓	*	240°C	7/8	4/5	X	X	
SILVER	PE 48/7/7030F	877C	9022	✓	✓	✓	300°C	8	5	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	200°C	7	4	✓	✓	
BEIGE	PE 48/2/2097F	7506C	None	✓	✓	✓	300°C	8	4/5	✓	✓	Greenest shade through to reddest shade heavy metal free beiges
	PE 48/2/1266F	4655C	None	✓	✓	✓	250°C	7/8	4	✓	✓	
IVORY	PE 48/2/9600F	None	9001	✓	✓	✓	300°C	7/8	4	✓	✓	Greenest shade through to reddest shade heavy metal free ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	300°C	8	4/5	✓	✓	

GREY	PE 48/7/8368F	431C	7024	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade heavy metal free greys
	PE 48/7/8035F	C. GRAY 8C	None	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8899F	C. GRAY 6C	7045	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	300°C	8	5	✓	✓	
TERRACOTTA	PE 48/8/1340F	1675C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID BROWN	PE 48/8/1281F	None	8012	✓	✓	✓	300°C	8	5	✓	✓	
DARK BROWN	PE 48/8/1550F	4975C	None	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade heavy metal free browns
	PE 48/8/1028F	476C	None	✓	✓	✓	300°C	8	5	✓	✓	

White products

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							PIGMENT LOADING, equivalent to TiO2 content	INCLUDES ANTIBLOCK ?	RECOMMENDED USE					COMMENTS
		PE	PP	PS	ABS	PA	PET	PVC			EXTRUSION FILM	EXTRUSION – PROFILE / SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUND-ING	
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
UN 53/1/03	Universal	✓	✓	✓	*	*	✓	*	75%	X	✓	✓	✓	✓	✓	High strength for diverse applications

Colloids D-K® Environmental Range

D-K®100

The **D-K® 100** range consists of pro-degradant additive masterbatches developed by Colloids. These products are designed to cause conventional polyolefins to degrade and disintegrate whilst having minimal effect on initial polymer products or processing conditions.

D-K® 100 products are primarily intended for use in polyethylene film but can also be used in other polyolefin articles. Ideally such products should be used in applications where the degradation properties give a functional benefit in the finished piece. Such applications may include mulch film, rubbish bags, 'throw away' packaging etc.

D-K® 100 formulations have European food contact approval and, if colour is required, should be used in conjunction with Colloids range of **standard colour masterbatches for film** and **bespoke colours**.

D-K®200 and D-K®300

Colloids **D-K® 200** and **D-K® 300** product ranges both consist of a selection of colours based on polymers which are biodegradable and compostable.

The **D-K® 200** range is designed to be used in flexible applications such as carrier bags and caddy bin liners. The **D-K® 300** range is designed for use in rigid applications such as food packaging and personal care products.

The two ranges are designed for use in compostable polymers with the same or similar composition to the masterbatch base. Both base polymers are certified EN 13432 ('Requirements of packaging recoverable through composting and biodegradation') and DIN CERTCO biodegradable and compostable when used at the designated thickness.

The pigments incorporated in the masterbatches have all been carefully selected to meet EN 13432 specified element levels in the final packaging.

PACE® Engineering polymer specific grades

	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	✓	✗	✗	25%	High jet furnace carbon black	✓	✓	✓	✓	Superior quality carbon black masterbatch for colouration and UV stability

For further technical information or samples of any of our products please contact the Colloids sales office.