

who benefits from our superior pigments
for plastics applications?

you do.

working for you



The broadest
range of color for
your plastics
colorant needs.



Sun Chemical Performance Pigments is a world leading manufacturer of colors, effects and dispersions for the plastics industry. Through Quality, Service and Innovation, we are able to expand our product portfolio into new shades, chemistries and dispersions.

Illustrated in this brochure is the main product line from Sun Chemical organic pigments recommended for plastics. However, the list is not all inclusive and there may be other grades available to better suit your requirements.

Contact your local Sun Chemical sales representative to answer any further questions you may have about our products.

Trade Name Information

Benda-Lutz - Aluminum and goldbronze effects.

Fanchon - High performance yellow and orange pigments for plastics.

Fastogen Super - High performance quinacridone pigments for plastics.

Indofast - High performance carbazole violet pigments for plastics.

Palomar - High performance tetrachlor phthalocyanine and Indanthrone pigments.

Predisol - A range of highly pigmented (50 - 60%) dispersions for plastics.

Sunbrite - Classical azo pigments for plastics.

Sunfast - Phthalocyanine pigments for plastics.

SunGEM XST - Glass-based pearlescent effects.

SunMICA - Natural untreated pearlescent micas.

SunMICA LUX - Synthetic mica based pearlescent effects.



Technical Data and Physical Properties

Heat Stability:

Maximum suggested process temperatures. While higher temperatures may be possible, testing in critical applications is suggested. Our testing consists of color level: Tint=0.1% Pigment and 1.9% TiO₂ at 5 minute intervals for each temperature level. CIE Lab Delta E ≤ 2 from the lowest molding temperature was taken as the cut off point in establishing the maximum temperature quoted unless otherwise stated.

Light Fastness:

Light Stability Results are based on Xenon Lamp exposure in accordance with standard methods. The light fastness rating (see below) is derived by assessment against the fade of Blue Wool standards exposed at the same time (ISO 105 B02). Does not imply weatherfast stability.

Light Fastness Scale:

1. Poor
2. Moderate
3. Below Average
4. Average
5. Above Average
6. Very Good
7. Excellent
8. Outstanding

Application Data

- A: Generally good properties
 B: Possible heat stability problems
 C: Possible migration problems
 D: Possible migration of carrier resins

FDA Status

- Ø = No
 P = Pending
 ✓ = Yes
- ¹ = For use not to exceed 1% by weight of polymers. The finished articles are to contact food only under conditions of use B through H described in table 2 of 21CFR 176.170 (c).
 - ² = Please review FCN (to be assigned) for details condition and use restrictions.
 - ³ = The polyethylene resin in these products complies with 21 CFR 177.1520 for use as a component of food contact coatings at levels up to and including 50% by weight of any mixture employed as a food contact coating conforming to paragraph (c) 2.3.
 - ⁴ = For use at levels not to exceed 1.0% by weight of polymers. The finished articles are to contact food only under conditions of use B through G described in table 2 of 21 CFR 176.170 (c).
 - ⁵ = Compliant to 21 CFR 177.2600.
 - ⁷ = For use at levels not to exceed 1.0 percent by weight of polymers; for food contact only under conditions of use C through H described in table 2 of 21 CFR 176.170(c), provided further that the finished articles shall not be filled at temperatures exceeding 158 °F (70 °C)

Delivering Quality, Innovation and Service

The employees at Sun Chemical Performance Pigments are personally committed to being the customers' partner of choice. There is never any question as to the priorities in executing each day's business because the employees make every operating decision by implementing the following four key initiatives:

Safety:

Putting safety first in everything the employee does.

People Development:

Continually improving the skills of Sun Chemical's people.













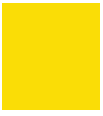















Customer Value System:

Creating value and satisfaction for our customers through profitable and sustainable growth, continuous improvement of our processes, and by supplying products that consistently meet customers' specifications.

Productivity and Six Sigma:

Continually improving the effectiveness of the Quality Management System through ISO 9001 Registration, Productivity Initiatives and Six Sigma.



Masstone	1:19 Tint	Colour Index	Trade Name	Product Code	Description	FDA	Application Data									Density g/cc	Light Fastness Blue Wool Scale 1-8 Scale 1:19 Tint	Heat Stability CIE Lab DE °C/°F
							Rubber 176°C/350°F	pPVC 137°C/280°F	LDPE 137°C/280°F	PP 215°C/420°F	HDPE 215°C/420°F	Styrenics 215°C/420°F	Nylon 6 260°C/500°F	PC 260°C/500°F	PET 260°C/500°F			
		Yellow 138	Fanchon	279-5138	Quinophthalone Yellow	√7	A	C	A	A	A	A	—	A	B	2.01	7	260°C / 500°F
		Yellow 168	Sunbrite	262-7168	Monoazo Yellow	Ø	A	A	A	A	A	B	—	—	—	1.70	7	250°C / 490°F
		Yellow 151	Fanchon	271-5151	Benzimidazolone Yellow	Ø	A	C	A	A	A	A	—	A	A	1.59	7	290°C / 550°F
		Yellow 17*	Sunbrite	275-0023	Diarylde AAOA Standard Plastics Grade	Ø	A	C	A	B	B	B	—	—	—	1.4	5-6	200°C / 392°F
		Yellow 154	Fanchon	271-7154	Benzimidazolone Yellow	Ø	A	C	A	B	B	B	—	—	—	1.61	7-8	205°C / 400°F
		Yellow 155	Sunbrite	279-0155	Disazo Condensation H / S @ DE 3	Ø	A	C	C	A	A	A	—	—	—	1.41	7	275°C / 525°F
		Yellow 14*	Sunbrite	274-5126	Diarylde AAOT Standard Plastics Grade	Ø	A	C	A	B	B	B	—	—	—	1.39	3-4	200°C / 392°F
				274-3954	Diarylde AAOT Standard Plastics Grade	Ø	A	C	A	B	B	B	—	—	—	1.38	3-4	200°C / 392°F
		Yellow 13*	Sunbrite	275-0049	Diarylde AAMX Standard Plastics Grade	Ø	A	C	A	B	B	B	—	—	—	1.38	5	200°C / 392°F
				275-9849	Diarylde AAMX Standard Plastics Grade	Ø	A	C	A	B	B	B	—	—	—	1.38	5	200°C / 392°F
		Yellow 62	Sunbrite	262-3562	Ca Lake Mono Azo Yellow H / S @ DE 3	Ø	A	A	A	A	A	B	—	—	—	1.59	5	230°C / 445°F
		Yellow 180	Fanchon	271-5180	Benzimidazolone Yellow	√4	A	A	A	A	A	A	B	A	B	1.27	7-8	300°C / 575°F
		Yellow 191	Fanchon	279-9191	Monoazo Calcium Salt	√1	A	A	A	A	A	B	—	B	-	1.77	7	300°C / 575°F
		Yellow 83*	Sunbrite	275-0570	Diarylde AADMCA Standard Plastics Grade	Ø	A	C	A	B	B	A	—	—	—	1.47	5-6	200°C / 392°F
				275-4570	Diarylde AADMCA Standard Plastics Grade	Ø	A	C	A	B	B	A	—	—	—	1.47	5-6	200°C / 392°F
		Yellow 181	Fanchon	271-0181	Benzimidazolone Yellow	√	A	A	A	A	A	A	—	—	—	1.45	8	300°C / 575°F
		Orange 43	Fanchon	276-1430	Perinone - Excellent weather fastness	Ø	A	C	A	A	A	A	A	A	—	1.6	8	290°C / 550°F

* Diarylides DCB Based pigment maximum recommended processing temp should not exceed 200°C

Masstone	1:19 Tint	Colour Index	Trade Name	Product Code	Description	FDA	Application Data									Density g/cc	Light Fastness Blue Wool Scale 1-8 Scale 1:19 Tint	Heat Stability CIE Lab DE °C/°F
							Rubber 176°C/350°F	pPVC 137°C/280°F	LDPE 137°C/280°F	PP 215°C/420°F	HDPE 215°C/420°F	Styrenics 215°C/420°F	Nylon 6 260°C/500°F	PC 260°C/500°F	PET 260°C/500°F			
		Orange 64	Fanchon	271-6430	Benzimidazolone Orange	√1	A	A	A	A	A	A	–	B	–	1.8	7	300°C / 575°F
			Fanchon	271-6437	Benzimidazolone Orange	√1	A	A	A	A	A	A	–	B	–	1.8	7	300°C / 575°F
		Orange 13*	Sunbrite	276-0203	Pyrazolone Orange – EU	Ø	B	C	B	B	B	–	–	–	–	1.43	5	175°C / 350°F
				276-2384	Pyrazolone Orange – NAFTA	Ø	B	C	B	B	B	–	–	–	–	1.43	5	175°C / 350°F
		Orange 46	Sunbrite	212-7152	Ba Azo Orange - Standard Dry	Ø	A	C	A	B	A	A	–	–	–	1.74	2	300°C / 575°F
		Red 53:1	Sunbrite	215-5652	Ba RLC - Standard Plastic Grade	Ø	A	C	A	B	A	A	–	–	–	1.78	2	300°C / 575°F
				215-7616	Ba RLC - Controlled for Soluble Barium	Ø	A	C	A	B	A	A	–	–	–	1.78	2-3	300°C / 575°F
				415-0619	Sunbrite Red 53:1 (P / C)	Ø	A	C	A	B	A	A	–	–	–	1.75	1-2	300°C / 575°F
		Red 48:1	Sunbrite	234-3955	Ba2B	Ø	A	A	A	A	A	B	–	–	–	2.02	5	290°C / 550°F
		Red 254	Sunbrite	226-6254	DPP Red	√1	A	A	A	A	A	A	–	–	–	1.75	7	290°C / 550°F
		Red 48:3	Sunbrite	234-0124	Sr 2B - Fiber Grade H / S @ DE 3	Ø	A	C	A	A	A	A	–	–	–	1.74	4	250°C / 480°F











							Application Data									Density	Light Fastness	Heat Stability
Masstone	1:19 Tint	Colour Index	Trade Name	Product Code	Description	FDA	Rubber	pPVC	LDPE	PP	HDPE	Styrenics	Nylon 6	PC	PET		Blue Wool Scale	CIE Lab DE
							176°C/350°F	137°C/280°F	137°C/280°F	215°C/420°F	215°C/420°F	215°C/420°F	260°C/500°F	260°C/500°F	260°C/500°F		1-8 Scale	°C/°F
		Red 48:2	Sunbrite	234-0781	Ca2B - Standard Dry Standard Plastics Grade H / S @ DE 3	Ø	A	C	A	A	A	B	–	–	–	1.73	5	230°C / 450°F
				234-0123	Ca2B - Fiber Grade H / S @ DE 3	Ø	A	C	A	A	A	B	–	–	–	NT	5	230°C / 450°F
		Red 170	Sunbrite	235-7070	Napthol Opaque	Ø	A	C	A	A	A	B	–	–	–	1.4	6	275°C / 525°F
				235-7170	Napthol Transparent	Ø	A	C	A	A	A	B	–	–	–	1.35	5	275°C / 525°F
		Red 49:2	Sunbrite	211-4620	Ca Lithol Red	Ø	A	C	A	A	A	B	–	–	–	1.52	2	275°C / 525°F
		Red 207	Fastogen Super	228-0SGK	Very yellow shade red quinacridone with excellent fastness properties, namely weather fastness	Ø	A	A	A	A	A	A	A	A	A	1.6	8	300°C / 575°F
		Red 57:1	Sunbrite	219-0125	Ca Lithol Rubine - Fiber Grade	Ø	A	C	A	A	A	B	–	–	–	1.66	4	240°C / 465°F
		Red 60:1	Sunbrite	225-2480	Ba / Al Scarlet	Ø	A	A	A	A	A	A	–	–	–	1.96	4	260°C / 500°F
		Red 176	Sunbrite	235-1760	Benzimidazolone	Ø	A	A	A	A	A	–	–	–	–	1.3	6	275°C/525°F
			Predisol PE	L35-P276	60% pigment 40% PE	Ø	–	–	A	A	A	–	–	–	–	1.1	6-7	270°C / 515°F
		Magenta 122	Fastogen Super	228-RE03	Fastogen Super High-performance Quinacridone	√2	A	A	A	A	A	A	B	A	B	1.5	7	300°C / 575°F
		Violet 23	Indofast	246-0505	Dioxazine Violet - Standard Plastics Grade	Ø	A	C	A	A	A	A	B	B	B	1.5	7-8	250°C / 475°F



						FDA	Application Data									Density g/cc	Light Fastness Blue Wool Scale 1-8 Scale 1:19 Tint	Heat Stability CIE Lab DE °C/°F
Masstone	1:19 Tint	Colour Index	Trade Name	Product Code	Description		Rubber	pPVC	LDPE	PP	HDPE	Styrenics	Nylon 6	PC	PET			
							176°C/350°F	137°C/280°F	137°C/280°F	215°C/420°F	215°C/420°F	215°C/420°F	260°C/500°F	260°C/500°F	260°C/500°F			
		Blue 15:0	Sunfast	248-3669	PCN RS Blue - Non Stabilized	√	A	B	B	B	B	B	—	—	—	1.7	7-8	260°C / 500°F
		Blue 15:1	Fastogen	248-55AE	PCN RS Blue	√	A	A	A	A	A	A	A	A	A	1.5	7	300°C / 575°F
			Sunfast	248-3745	PCN RS Blue - Stabilized - Standard Plastics Grade	√	A	C	A	A	A	A	B	B	B	1.62	7-8	300°C / 575°F
				248-3720	PCN RS Blue - Stabilized - Slightly Less Red than 248-3745	√	A	C	A	A	A	A	B	B	B	1.6	7-8	300°C / 575°F
				248-3700	PCN RS Blue - Stabilized - Slightly Less Red than 248-3745	√	A	C	A	A	A	A	A	A	A	1.6	7-8	300°C / 575°F
				248-380F	PCN RS Blue - Stabilized - Fiber Grade	√	A	C	A	A	A	A	B	B	B	1.62	7-8	300°C / 575°F
				248-6920	PCN RS Blue Hemi CI - Slightly Green vs. 248-3745	√	A	C	A	A	A	A	A	A	A	1.62	7-8	300°C / 575°F
				248-0061	PCN RS Blue Mono CI - Green vs. 248-3745	√	A	A	A	A	A	A	A	A	A	1.7	7-8	300°C / 575°F



						FDA	Application Data								Density g/cc	Light Fastness Blue Wool Scale 1-8 Scale 1:19 Tint	Heat Stability CIE Lab DE °C/°F		
Masstone	1:19 Tint	Colour Index	Trade Name	Product Code	Description		Rubber	pPVC	LDPE	PP	HDPE	Styrenics	Nylon 6	PC				PET	
							176°C/350°F	137°C/280°F	137°C/280°F	215°C/420°F	215°C/420°F	215°C/420°F	260°C/500°F	260°C/500°F				260°C/500°F	
		Blue 15:3	Sunfast	249-A80P	PCN Green Shade Blue	✓	A	A	A	A	A	A	B	B	B	1.6	7-8	300°C / 575°F	
				249-908P	PCN Green Shade Blue	✓	A	A	A	A	A	A	A	B	B	B	1.6	7-8	300°C / 575°F
				249-7900	PCN Green Shade Blue	✓	A	A	A	A	A	A	A	A	A	A	1.77	7-8	300°C / 575°F
				249-790F	PCN Green Shade Blue - Fiber Grade	✓	A	A	A	A	A	A	A	A	A	A	1.69	7-8	300°C / 575°F
				249-1284	PCN GS Blue - Standard Plastics Grade	✓	A	A	A	A	A	A	A	A	A	A	1.64	7-8	290°C / 550°F
		Blue 15:4	Sunfast	249-3450	PCN GS Blue NCNF	✓	A	A	A	A	A	A	A	A	A	1.61	7-8	300°C / 575°F	
		Green 7	Sunfast	264-8142	PCN Green - Very Blue Shade	✓	A	A	A	A	A	A	A	A	A	2.11	7-8	300°C / 575°F	
				264-8735	PCN Green - Slightly Yellow vs. 264-0414	✓	A	A	A	A	A	A	A	A	A	2.24	7-8	300°C / 575°F	
				264-0414	PCN Green - Standard Plastics Grade	✓	A	A	A	A	A	A	A	A	A	2.3	7-8	300°C / 575°F	
				264-7700	PCN Green - Yellow vs. 264-0414 - Standard Plastics Grade	✓	A	A	A	A	A	A	A	A	A	2.16	7-8	300°C / 575°F	
				264-7701	PCN Green - Economical Grade	✓	A	A	A	A	A	A	A	A	A	2.45	7-8	300°C / 575°F	
				264-770F	PCN Green - Fiber Grade (14um)	✓	A	A	A	A	A	A	A	A	A	2.05	7-8	300°C / 575°F	
				264-77FF	PCN Green - Fiber Grade (5um)	✓	A	A	A	A	A	A	A	A	A	2.20	7-8	300°C / 575°F	
				264-7405	PCN Green	✓	A	A	A	A	A	A	A	A	A	2.0	7-8	300°C / 575°F	
		Green 36	Sunfast	264-7036	PCN Green - Very Yellow Shade	Ø	A	A	A	A	A	A	A	A	A	2.5	7-8	300°C / 575°F	
	Predisol PE		L64-P236	60% pigment 40% PE	Ø	—	—	A	A	A	—	—	—	—	1.28	7-8	300°C / 575°F		

Benda-Lutz Provides Brilliant Results and Uncompromised Details

Brilliant results are usually the sum of perfect details. Since 1910, Benda-Lutz has been the brand synonymous with the highest quality ingredients for plastics and engineering polymers.

We tailor solutions to bring the latest technology to market. With 100 years of experience, and a depth of resources from which to draw, we have the people, knowledge and products to make any project a success. We are constantly working to deliver quality, service and innovation to our clients worldwide.

Benda-Lutz Aluminium Pastes:

A wide range of metallic effects for plastics applications. They are most commonly used in masstone applications for their industry leading opacity and smooth patina finish.

Benda-Lutz MAXAL:

These non-leafing, lenticular aluminium pastes provide the highest level of metallic brilliance and travel for plastics. They are produced via sophisticated milling processes yielding narrow particle size distributions and polished flake surfaces.

Benda-Lutz METALLIC:

A delicate balance between sparkle, brilliance and opacity. These non-leafing aluminium flakes are brighter than standard grades and are designed for use in tinted systems allowing for unlimited colored metallic effects.

Benda-Lutz COMPAL:

Solid aluminium pellet preparations designed for an extensive range of aesthetic and functional plastics applications. They provide superior brilliance, sparkle and opacity in a non-dusting, non-hazardous and low VOC delivery form with improved shelf life.

Benda-Lutz GOLDBRONZE:

Premium flake pigments made from copper or copper-zinc alloys. The portfolio consists of a variety of particle sizes offered in standard shades of rich gold, rich pale gold, pale gold and pure copper.

Benda-Lutz STABILIZED GOLDBRONZE:

Standard untreated goldbronze powders are limited by their relatively low temperature stability (maximum temperature = 180 °C). Based on leading encapsulation technology, Benda-Lutz STABILIZED GOLDBRONZE pigments are characterized by superior temperature stability and chemical resistance. This novel inorganic encapsulation methodology provides the necessary temperature stability (maximum temperature = 280 °C) for expanded compatibility with a wide range of polymers.

Benda-Lutz Brands	Leafing	Non-leafing	METALLIC	MAXAL		COMPAL	GOLDBRONZE	Stabilized GOLDBRONZE
Type of Metal	Al	Al	Al	Al		Al	Cu/Zn Alloy	Cu/Zn Alloy
Carrier	Mineral Oil	Mineral Oil	Mineral Oil	Mineral Oil	DOA Plasticizer	PE Wax	Mineral Oil	Mineral Oil
Applications								
Rubber	A	A	A	A	A	A	B	A
PVC	-	-	-	-	A	-	B	A
LDPE	A	A	A	A	-	A	B	A
PP	A	A	A	A	-	A	-	A
HDPE	A	A	A	A	-	A	-	A
Styrenics	A	A	A	A	-	A	-	A
Nylon 6	B	B	B	B	B	B	-	B
PC	B	B	B	B	B	B	-	B
PET	B	B	B	B	B	B	-	B



Add eye-catching shimmer to your products for more appeal.

Pearlescent Effect Pigments

Sun Chemical pearlescent effect pigments add depth, shimmer, sparkle and provide exceptional styling possibilities. This line offers a significant selection of effects for batch-to-batch color consistency with a wide range of particle sizes. We can work with you to optimize the effect pigment selection to meet your exact color and application needs.

Sun Chemical pearlescent pigments can deliver a variety of striking effects, from the silky satin of SunMICA to the brilliant sparkle effect of SunGEM XST. Our portfolio of effect pigments enables designers to create blends with absorption pigments as well. Our pearlescent pigments are suitable for most plastics applications and engineering polymers.

Effect Pigment Brands	SunMICA	SunMICA FUSE	SunMICA LUX	SunGEM XST
Type	Natural Mica	Natural Mica	Synthetic Mica	Glass Flake
Applications				
Injection Molding	✓	✓	✓	✓
Blow Molding	✓	✓	✓	✓
Films	✓	✓	✓	✓
Packaging	✓	✓	✓	✓
Styling	✓	✓	✓	✓



SunMICA

SunMICA special effect pigments consist of thin natural mica coated with optical layers of titanium dioxide and / or iron oxide. Through precise control of light reflection and refraction, SunMICA offers pure silver-white, interference color, gold and metallic luster effects.

SunMICA FUSE

The SunMICA FUSE Series delivers unique microsphere geometry allowing for higher throughput, more complete pigment dispersion and substantially faster cleanout. In addition, the FUSE Series provides superior mixing and makes the pearlescent pigments less susceptible to breakage.

SunMICA LUX

SunMICA LUX utilizes ultra smooth, optically pure synthetic mica flakes to produce the purest, cleanest whites and most lustrous interference colors. This unique material does not contain any iron or heavy metal pigments that can detract from the premium appearance. SunMICA LUX delivers the market's best pearlescent white effects.

SunGEM XST

SunGEM XST effect pigments are based on ultra smooth glass platelets coating with titanium dioxide. They are exceptionally transparent making them ideal for use in combination with absorption pigments to provide dimensional sparkle to your most chromatic color formulations. Interference grades accentuate the contours and shape of unique designs that are unmistakable.

* Diarylides DCB Based pigment maximum recommended processing temp should not exceed 200°C



A partner who transforms with you.

Today's environment requires more than change. It demands transformation — and a partner who's willing to transform with you. Sun Chemical, a member of the DIC group, is a leading producer of packaging and graphic solutions, color and display technologies, functional products, electronic materials, and products for the automotive and healthcare industries. Together with DIC, Sun Chemical is continuously working to promote and develop sustainable solutions to exceed customer expectations and better the world around us. With combined annual sales of more than \$8.5 billion and 22,000+ employees worldwide, the DIC Group companies support a diverse collection of global customers. As you move forward into a world of stiffer competition, faster turnarounds, more complex demands and sustainable products, count on Sun Chemical to be your partner.

working for you.

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