

CONTENTCONTENTCONTENTCONTENTCONTENT

- 1. DragoColor® colorants for foods, drugs and cosmetics 6
- 2. DragoColor® dye, lake and pigment compounds 10
- 3. DragoColor® colorants for instant products 14
- 3.1 General processing information 14-15

SO RED TASTES BETTER.

SO YELLOW FEELS BETTER.

SO BLUE LASTS LONGER.

More colors, more quality, more options: DragoColor® by Symrise is the ideal solution for every product and every taste.

The DragoColor® product range offers a wide selection of water- and oil soluble colorants, color lakes and pigments to suit your individual preferences in coloring foods, drugs and cosmetics.

From sweets, ice cream, dessert products and soft drinks, instant beverages, soups and sauces all the way to snack foods – DragoColor® gives your foods that certain something. At the same time, it is equally suited for liquid medicines, pills, coated tablets and bath articles, toothpastes and gels, mouth washes, oral care products and many other cosmetics¹ DragoColor® will bring the right nuance to everything you make. With the DragoColor® range, Symrise brings more color into your life – and into your business.

¹ See also the “DragoColor® colorants for cosmetics” brochure. It will provide you with more information about other Symrise products which are not suitable for use in food.

SAFETY AND DRAGOCOLOR®: QUALITY YOU CAN COUNT ON.

Analyzed, tested, approved: DragoColor® food dyes fulfill the legal guidelines of the member states of the European Union for coloring foods² and drugs. DragoColor® products also fulfill guidelines in many other countries as well. All food dyes are suitable and have been approved for use as colorants in cosmetic products.

² The maximum quantities of food dyes stated in the EU directive 94/36/EWG are to be observed.

SYMRISE SERVICE: WHAT WE CAN DO FOR YOU.

Everything at a glance: The overview below will provide you with everything you need to know about the product descriptions, application instructions and recommended doses. If you have further questions about legal guidelines and using DragoColor® colorants for international export, we would be more than happy to assist you.

Please contact:

Bernd Schröder
Symrise GmbH & Co. KG
Color Dept.
37601 Holzminden/Germany
Phone: + 49 / 0 55 31 / 90-32 48
Fax: + 49 / 0 55 31 / 90-38 20
E-Mail: bernd.schroeder@symrise.com

Our complete Dictionary of Colors can be found online at www.symrise.com.

1. DragoColor® colorants for foods, drugs and cosmetics

Listed by E-Number

E-Number	Color Index Number	Product Number	Name	Color, Delivery form, Solubility	Examples of application ³
E 101 (i)	—	115418	Riboflavin pur (Lactoflavin)	yellow, powder, water soluble	sweets, desserts
E 102	19140	100296	Tartrazine 85%	yellow, powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 102	19140	656802	FD&C Yellow No. 5 85%	yellow, powder, water soluble	for the export in the USA: beverages, sweets, desserts, bubble bath, dishwashing
E 102	19140	106654	FD&C Yellow No. 5 lake 24–28%	yellow, powder, lake	for the export in the USA: dragees, fatty filling compounds
E 102	19140:1	656828	Tartrazine lake 17%	yellow, powder, lake	dragees, fatty filling compounds
E 104	47005	100290	Quinoline Yellow 70%	yellow, powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 104	47005	645296	Quinoline Yellow granular 70%	yellow, granular, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 104	47005:1	656829	Quinoline lake 11%	yellow, powder, lake	dragees, decorative cosmetics, fatty filling compounds
E 110	15985	100291	Orange Yellow 85%	orange, powder, water soluble	sweets, beverages, desserts, bubble bath, dishwashing
E 110	15985	645571	Orange Yellow granular 85%	orange, granular, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 110	15985	656685	Golden Orange Yellow 30%	orange, powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 110	15985	656803	FD&C Yellow ⁴ No. 6 85%	orange, powder, water soluble	for the export in the USA: beverages, sweets, desserts, bubble bath, dishwashing
E 110	15985:1	186691	FD&C Yellow No. 6 lake	orange, powder, lake	for the export in the USA: dragees, decorative cosmetics, fatty filling compounds
E 110	15985:1	656831	Orange Yellow lake 11%	orange, powder, lake	dragees, decorative cosmetics, fatty filling compounds
E 120	75470	656825	Carmine 43%	red, powder, water soluble	sweets, beverages
E 120	75470	656461	Carmine 4.1–4.5%	red, powder, water soluble	sweets, beverages
E 122	14720	100293	Azorubine 85%	red, powder, water soluble	beverages, sweets, desserts, bubble bath
E 122	14720	656445	Azorubine 35%	red, powder, water soluble	beverages, sweets, desserts, bubble bath
E 122	14720	656832	Azorubine lake 11–13%	red, powder, lake	dragees, decorative cosmetics, fatty filling compounds
E 123	16185	100292	Amaranth 85%	red, powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
E 123	16185	656448	Amaranth 32%	red, powder, water soluble	beverages, sweets, desserts, bubble bath
E 124	16255	100300	Ponceau 4R 70% (Cochineal Red A)	red, powder, water soluble	beverages, sweets, desserts, bubble bath
E 124	16255	656813	Ponceau 4R 80%	red, powder, water soluble	beverages, sweets, desserts, bubble bath
E 124	16255	656447	Ponceau 4R 28%	red, powder, water soluble	beverages, sweets, desserts, bubble bath

³ There are restrictions on the fields of application and on quantities for food dyes.

⁴ The American designation “yellow” is misleading, since the aqueous solution of the dye is orange.

E-Number	Color Index Number	Product Number	Name	Color, Delivery Form, Solubility	Examples of application ³
E 127	45430	656808	Erythrosine 85%	red, powder, water soluble	cherries/tinned food
E 128	18050	656809	Red 2G	red, powder, water soluble	meat products, bubble bath; in the EU not allowed for coloring drugs
E 129	16035	100304	Allura Red 85%	red, powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash; in the EU not allowed for coloring drugs
E 129	16035	100295	FD&C Red No. 40 85%	red, powder, water soluble	for the export in the USA: beverages, sweets, desserts, bubble bath, mouth wash
E 129	16035	186693	FD&C Red No. 40 lake 35-41%	red, powder, lake	for the export in the USA: dragees, decorative cosmetics, fatty filling compounds
E 131	42051	100294	Patent Blue V 80%	blue, powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste
E 131	42051	645295	Patent Blue granular 85%	blue, granular, water soluble	beverages, sweets, desserts, mouth wash, gel toothpaste
E 131	42051	656597	Brilliant Blue 7.5%	blue, powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste
E 131	42051	656598	Patent Blue 50%	blue, powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste
E 132	73015	100298	Indigotine 85%	blue, powder, water soluble	sweets
E 132	73015	656827	Indigotine lake 7.5%	blue, powder, lake	dragees, decorative cosmetics, fatty filling compounds
E 132	73015	656602	Indigotine 16%	blue, powder, water soluble	sweets
E 133	42090	656601	Brilliant Blue FCF 85%	blue, powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste; in the EU not allowed for coloring drugs
E 133	42090	645367	Brilliant Blue FCF granular 85%	blue, granular, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste; in the EU not allowed for coloring drugs
E 133	42090	100301	FD&C Blue No. 1 85%	blue, powder, water soluble	for the export in the USA: beverages, sweets, desserts, bubble bath, mouth wash, gel toothpaste
E 133	42090:2	186692	FD&C Blue No. 1 lake 10-13%	blue, powder, lake	for the export in the USA: dragees, decorative cosmetics, fatty filling compounds
E 141	75810	656678	Copper chlorophyll complex	green, paste, oil soluble	oils and fats, creams, soap
E 141	75810	656821	Copper chlorophyll complex 10%	green, paste, oil soluble	oils and fats, creams, soap
E 141 (ii)	75815	656683	Sodium copper chlorophyllin 9%	green, powder, water soluble	beverages (not in sour range), sweets
E 141	75815 ⁵	100308	Sodium copper chlorophyllin 95-100%	green, powder, water soluble	beverages (not in sour range), sweets
E 142	44090	656805	Brilliant Acid Green 78%	green, powder, water soluble	sweets
E 150 c	—	656815	Caramel	brown, powder, water soluble	soups, sauces, sweets
E 150 d	—	103603	Couleur	brown, liquid, water soluble	acid-stable caramel, particularly suitable for softdrinks
E 151	28440	100303	Brilliant Black BN 80%	black, powder, water soluble	beverages, sweets, bubble bath
E 155	20285	656798	Brown HT 85%	brown, powder, water soluble	sweets; in the EU not allowed for coloring drugs and cosmetics
E 160 a	40800	656818	β-Carotene approx. 0.3%	yellow-orange, liquid, oil soluble	margarine, oils, mayonnaise, fats, soft cheese, creams, cosmetic products
E 160 a	40800	656819	β-Carotene approx. 10%	yellow-orange, powder, water dispersible	beverages, sweets, desserts
E 160 b	75120	656816	Annatto approx. 0.5%	orange, liquid, oil soluble	margarine, oils, mayonnaise, soft cheese
E 163	—	656824	Encyanine	red, powder, water soluble	sweets, beverages
E 171	77891	656838	Titanium dioxide	white, powder, pigment	dragees, sweets, decorative cosmetics, soap, toothpaste
E 172	77492	656835	Iron oxide Yellow	yellow, powder, pigment	dragees, sweets, decorative cosmetics, soap
E 172	77491	656836	Iron oxide Red	red, powder, pigment	dragees, sweets, decorative cosmetics, soap
E 172	77499	656837	Iron oxide Black	black, powder, pigment	dragees, sweets, decorative cosmetics, soap

³ There are restrictions on the fields of application and on quantities for food dyes.

⁵ The number C.I. 75810 as indicated in numerous publications and articles of legislature is incorrect.

2. DragoColor® dye, lake and pigment compounds

+	+	+	+	+	+
Color	Product Number	Name	E- and Color Index Number	Delivery Form, Solubility	Examples of application ⁶
red	607527	Red	E 124, 110, 132, C.I. 16255, 15985, 73015	powder, water soluble	beverages, sweets, desserts
red	656440	Scarlet Red	E 124, 110, C.I. 16255, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
brown	656605	Cognac Brown	E 102, 122, 151, C.I. 19140, 14720, 28440	powder, water soluble	sweets, desserts
brown	656606	Gold Brown	E 102, 110, 151, C.I. 19140, 15985, 28440	powder, water soluble	sweets, desserts
brown	656607	Light Brown	E 110, 102, 151, C.I. 15985, 19140, 28440	powder, water soluble	sweets, desserts
brown	656613	Chocolate Brown	E 110, 151, 122, 102, C.I. 15985, 28440, 14720, 19140	powder, water soluble	sweets, desserts
brown	100306	Chocolate Brown	E 102, 124, 151, C.I. 19140, 16255, 28440	powder, water soluble	sweets, desserts
brown	656614	Coffee Brown extra	E 102, 110, 124, 151, C.I. 19140, 15985, 16255, 28440	powder, water soluble	sweets, desserts
brown	656615	Chocolate Brown	E 110, 151, C.I. 15985, 28440	powder, water soluble	sweets, desserts
brown	656616	Coffee Brown	E 110, 122, 132, 104, C.I. 15985, 14720, 73015, 47005	powder, water soluble	sweets, desserts
brown	656617	Natural	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656621	Pigment Brown	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656622	Chocolate Brown	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656623	Brown 1478/14	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656624	Brown CT	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656625	Brown	E 172, C.I. 77491, 77499	powder, pigment	dragees, decorative cosmetics
brown	656626	Red Brown	E 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656627	Brown 1642/10	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656628	Brown 1464	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656629	Brown 1060/82	E 172, 171, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
brown	656630	Brown 1060/81	E 171, 172, C.I. 77491, 77492, 77499, 77891	powder, pigment	dragees, decorative cosmetics
yellow	614574	Yellow	E 160a, 101, C.I. 40800	powder, water dispersible	sweets, desserts
yellow	656304	Vanilla Yellow	E 104, 110, 124, C.I. 47005, 15985, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656635	Light Yellow	E 104, C.I. 47005, 30%	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656639	Egg Yellow	E 102, 110, 124, C.I. 19140, 15985, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath
yellow	656641	Banana Yellow	E 102, 110, C.I. 19140, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656642	Yellow	E 104, 110, C.I. 47005, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing

⁶There are restrictions on the fields of application and on quantities for food dyes.

Color	Product Number	Name	E- and Color Index Number	Delivery Form, Solubility	Examples of application ⁶
yellow	656644	Yellow	E 102, 110, C.I. 19140, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656645	Egg Yellow	E 102, 110, 124, C.I. 19140, 15985, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656648	Egg Yellow	E 102, 110, C.I. 19140, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656649	Egg Yellow	E 102, 110, C.I. 19140, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656650	Yellow	E 102, 124, C.I. 19140, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656651	Gold Yellow	E 102, 110, C.I. 19140, 15985	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
yellow	656654	Riboflavine	E 101	powder, water soluble	sweets, desserts
yellow	656656	Carotine	E 160a, C.I. 40800	powder, water dispersible	beverages, sweets, desserts, creams
yellow	100305	Lemon Yellow	E 102, C.I. 19140, 32%	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656302	Green	E 102, 131, 132	powder, water soluble	beverages, sweets, desserts
green	656449	Grass Green	E 104, 132, C.I. 47005, 73015	powder, water soluble	beverages, sweets, desserts
green	656661	Peppermint Green	E 102, 132, C.I. 19140, 73015	powder, water soluble	beverages, sweets, desserts
green	656662	Brilliant Green	E 102, 131, C.I. 19140, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656663	Brilliant Green extra	E 102, 131, C.I. 19140, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656664	Ocean Green	E 104, 131, C.I. 47005, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656665	Brilliant Green extra	E 104, 132, C.I. 47005, 73015	powder, water soluble	beverages, sweets, desserts
green	656668	Green BT	E 104, 110, 131, C.I. 47005, 15985, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, dishwashing
green	656670	Brilliant Green	E 104, 131, C.I. 47005, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, dishwashing
green	656671	Green	E 104, 110, 131, 124, C.I. 47005, 15985, 42051, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656672	Herbs Green	E 102, 131, 124, C.I. 19140, 42051, 16255	powder, water soluble	beverages, liqueur, sweets, desserts, bubble bath, dishwashing
green	656673	Leaves Green	E 104, 110, 131, C.I. 47005, 15985, 42051	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
green	656674	Green 114	E 102, 133, C.I. 19140, 42090	powder, water soluble	beverages, sweets, desserts, bubble bath, mouth wash, dishwashing
green	656675	Woodruff Green	E 102, 131, C.I. 19140, 42051	powder, water soluble	beverages, sweets, desserts, dishwashing
green	656676	Peppermint Green	E 102, 132, C.I. 19140, 73015	powder, water soluble	beverages, sweets, desserts, dishwashing
green	656830	Greenlake	E 104, 132, C.I. 47005, 73015	powder, lake	dragees, fatty filling compounds
green	656681	Yellow Green lake	E 104, 132, C.I. 47005, 73015	powder, lake	dragees, fatty filling compounds
green	646076	Green	E 102, 133, C.I. 19140, 42090 in Propandiol 1.2 a. Water	liquid, oil and water soluble	fatty filling compounds
orange	656687	Orange	E 102, 124, C.I. 19140, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
orange	656688	Red Orange	E 110, 124, C.I. 15985, 16255	powder, water soluble	beverages, sweets, desserts, bubble bath, dishwashing
black	656464	Black	E 123, 102, 142, C.I. 16185, 19140, 44090	powder, water soluble	sweets, desserts
black	656466	Black	E 151, 110, 104, C.I. 28440, 15985, 47005	powder, water soluble	sweets, desserts
black	656463	Dark Black	E 151, 110, 102, C.I. 28440, 15985, 19140	powder, water soluble	sweets, desserts

⁶ There are restrictions on the fields of application and on quantities for food dyes.

3. DragoColor® colorants for instant products⁷

+	+	+	+	+	+
Color	Product Number	Name	E- and Color Index Number	Delivery Form, Solubility	Examples of application ⁶
brown	656467	Caramel Brown	E 104, 110, 122, 132, C.I. 47005, 15985, 14720, 73015	powder, water soluble	desserts, beverage powders
brown	842716	Caramel Brown	E 102, 110, 151	powder, water soluble	desserts, beverages
yellow	656646	Light Yellow	E 104, C.I. 47005	powder, water soluble	beverage powders, sweets, desserts
yellow	656647	Yellow Instant	E 102, 110, 124, C.I. 19140, 15985, 16255	powder, water soluble	desserts, beverages
yellow	656468	Lemon Yellow	E 102, C.I. 19140	powder, water soluble	desserts, beverage powders
yellow	842150	Gold Yellow Instant	E 110, 102, C.I. 15985, 19140	powder, water soluble	desserts, beverages
green	656469	Brilliant Green TF	E 104, 110, 131, C.I. 47005, 15985, 42051	powder, water soluble	desserts, beverage powders
orange	656436	Gold Orange	E 110, C.I. 15985	powder, water soluble	desserts, beverages
orange	656470	Gold Orange	E 110, C.I. 15985	powder, water soluble	desserts, beverage powders

3.1 General processing information

Soluble dyes

Usually 30 to 50 g of dye are *dissolved* in one liter of hot water to process water soluble dyes. It must be noted that the appearance (i.e. aspect) of a dye powder, whether in individual dyes or mixtures of dyes, is normally *not* identical to the color of the solution and can vary from batch to batch. A comparison with the color standard must thus be performed by comparing the dye solutions (concentration of 1 g/l, for example).

Oil soluble dyes are dissolved in the oil that is used in the formulation of the cosmetic product being manufactured. The dose of the dye in the finished product usually ranges between 50 to 500 g/ton and can be varied as desired. Care must always be taken that the dye used is completely dissolved before being added to the product being developed. If necessary, this can be monitored by filtering the stock solution.

Color lakes and pigments

Pigments and lakes are insoluble dyes which achieve their colorant effect by being evenly distributed throughout the final product. Optimal processing of the dye and the desired color saturation can be ensured by means of appropriate technical equipment.

⁶There are restrictions on the fields of application and on quantities for food dyes.

⁷Particle size < 0.6 mm 100%, < 0.4 mm 93%.