



# GUIDE TO COLOR SELECTION

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# INTRODUCTION TO COLOR CODING

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This guide is intended to allow designers, printers and packagers to select the colors necessary to provide a scanning system with the highest Print Contrast Signals (PCS) possible. PCS is the value of the changes in reflectivity between the dark bars and light spaces of a symbol read by a scanner. If a scanner cannot properly measure the bar/space widths and arrangements, the scan will most likely fail. A good printing job giving well-defined bar and space edges and widths will be pointless if the scanner cannot define those edges and widths due to use of colors it cannot distinguish.

When bar codes of any symbology are printed, the best color combinations are black or dark blue bars on a white background. However package design, limited color selection or designer esthetics may require other color considerations. Contrast values as seen by a scanning laser may not be the same as what the human eye perceives. A good guide is to place the warm colors of the spectrum (Red, Orange, Yellow) for background and the cold colors of the spectrum (Blue, Green, Indigo, Violet) for the dark bars of a symbol.

It is important to note that results can vary depending on printing methods and materials used of the final piece. We recommend that PCS testing always be conducted under actual conditions used for the final job to achieve best results.

# HOW TO USE THE GUIDE TO COLOR SELECTION

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The colors listed in this guide show their percent reflectance to the immediate right of the PMS Number. A simple formula used along with Value and PCS Table should allow proper color selection for symbol printing.

1. Find the PMS Number of the color desired for the background and note its per cent reflectance.
2. Locate that percent reflectance in the first column of Value and PCS Table.
3. Read across the same line of the Value and PCS Table to find the maximum percent reflectance acceptable for the dark bars.
4. Choose a PMS color for the dark bars with a percent reflectance no greater than the value found.

# A QUICK EXAMPLE

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PMS 393U or Yellow Green is the desired background color for the symbol.

1. In the Color Reflectance Chart, note that PMS 393U has a reflectance value of 82%.

P 392U .....	19%
P 393U .....	82%
P 394U .....	77%
P 395U .....	72%

2. Referring to the Value and PCS Table, the next lowest value from 82% is 79.4% (choosing the next lowest value can ensure proper contrasting for bar color selection).

89.1
84.1
79.4
74.9

3. Following across the PCS Table to Column 2, note that the color selected for the dark bars should not exceed a 27.6% reflectance value.

89.1	37.1
84.1	32.0
79.4	27.6
74.9	23.7

4. Returning to the Color Reflectance Chart, find colors in the cool spectrum (Blue, Green, Indigo, Violet) with a reflectance lower than 27.6 for the dark bars.

It is important to remind the user that these are approximate values. If inks, substrates and printing methods are different from a high quality stock and method, refrain from using colors resulting in a marginal PCS.

# REFLECTANCE VALUE AND PCS TABLE

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Light Background: % Reflectance	Dark Bars: % Reflectance	Minimum PrintContrast
100.00	50.1	.499
94.4	43.1	.543
89.1	37.1	.583
84.1	32.0	.619
79.4	27.6	.653
74.9	23.7	.683
70.8	20.4	.712
66.8	17.6	.737
63.1	15.1	.760
56.2	11.2	.801
53.1	9.6	.818
50.1	8.3	.834
47.3	7.2	.849
44.7	6.2	.862
42.2	5.3	.874
39.9	4.6	.886
37.5	3.9	.904
35.5	2.9	.914
31.6	2.5	.921

# PANTONE COLOR REFLECTANCE CHART

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Yellow C . . . . .	.88%	P 136C . . . . .	.92%	P 169C . . . . .	.91%	P 218C . . . . .	.91%
Warm Red C . . . . .	.88%	P 137C . . . . .	.92%	P 170C . . . . .	.90%	P 219C . . . . .	.91%
Rubine Red C . . . . .	.88%	P 138C . . . . .	.76%	P 171C . . . . .	.91%	Rubine Red C . . . . .	.91%
Rhodamine Red C . . . . .	.82%	P 139C . . . . .	.45%	P 172C . . . . .	.92%	P 220C . . . . .	.90%
Purple C . . . . .	.82%	P 140C . . . . .	.25%	P 173C . . . . .	.71%	P 221C . . . . .	.81%
Violet C . . . . .	.22%	P 1345C . . . . .	.92%	P 174C . . . . .	.33%	P 222C . . . . .	.33%
Reflex Blue C . . . . .	.2%	P 1355C . . . . .	.92%	P 175C . . . . .	.21%	P 223C . . . . .	.91%
Process Blue C . . . . .	.2%	P 1365C . . . . .	.92%	P 176C . . . . .	.91%	P 224C . . . . .	.91%
Patone Green C . . . . .	.2%	P 1375C . . . . .	.92%	P 177C . . . . .	.91%	P 225C . . . . .	.91%
Yellow 012C . . . . .	.88%	P 1385C . . . . .	.62%	P 178C . . . . .	.91%	P 226C . . . . .	.91%
Orange 021C . . . . .	.88%	P 1395C . . . . .	.43%	Warm Red C . . . . .	.91%	P 227C . . . . .	.71%
Red 032C . . . . .	.86%	P 1405C . . . . .	.22%	P 179C . . . . .	.75%	P 228C . . . . .	.37%
Blue 072C . . . . .	.4%	P 141C . . . . .	.92%	P 180C . . . . .	.56%	P 229C . . . . .	.23%
Process Yellow C . . . . .	.86%	P 142C . . . . .	.92%	P 181C . . . . .	.30%	P 230C . . . . .	.91%
Process Magenta C . . . . .	.86%	P 143C . . . . .	.92%	P 1765C . . . . .	.91%	P 231C . . . . .	.91%
Process Cyan C . . . . .	.6%	P 144C . . . . .	.92%	P 1775C . . . . .	.91%	P 232C . . . . .	.92%
Process Black . . . . .	.0%	P 145C . . . . .	.73%	P 1785C . . . . .	.91%	Rhod.Red C . . . . .	.91%
P 100C . . . . .	.88%	P 146C . . . . .	.45%	P 1788C . . . . .	.91%	P 233C . . . . .	.80%
P 101C . . . . .	.88%	P 147C . . . . .	.21%	P 1795C . . . . .	.79%	P 234C . . . . .	.47%
P 102C . . . . .	.88%	P 148C . . . . .	.92%	P 1805C . . . . .	.53%	P 235C . . . . .	.31%
Yellow C . . . . .	.86%	P 149C . . . . .	.92%	P 1815C . . . . .	.36%	P 236C . . . . .	.91%
P 103C . . . . .	.61%	P 150C . . . . .	.92%	P 182C . . . . .	.91%	P 237C . . . . .	.91%
P 104C . . . . .	.42%	P 151C . . . . .	.92%	P 183C . . . . .	.91%	P 238C . . . . .	.91%
P 105C . . . . .	.20%	P 152C . . . . .	.66%	P 184C . . . . .	.91%	P 239C . . . . .	.91%
P 106C . . . . .	.92%	P 153C . . . . .	.48%	P 185C . . . . .	.91%	P 240C . . . . .	.76%
P 107C . . . . .	.92%	P 154C . . . . .	.34%	P 186C . . . . .	.91%	P 241C . . . . .	.50%
P 108C . . . . .	.92%	P 155C . . . . .	.92%	P 187C . . . . .	.70%	P 242C . . . . .	.47%
P 109C . . . . .	.92%	P 156C . . . . .	.92%	P 188C . . . . .	.45%	P 243C . . . . .	.91%
P 110C . . . . .	.76%	P 157C . . . . .	.92%	P 189C . . . . .	.91%	P 244C . . . . .	.91%
P 111C . . . . .	.51%	P 158C . . . . .	.92%	P 190C . . . . .	.91%	P 245C . . . . .	.91%
P 112C . . . . .	.39%	P 159C . . . . .	.73%	P 191C . . . . .	.91%	P 246C . . . . .	.91%
P 113C . . . . .	.92%	P 160C . . . . .	.41%	P 192C . . . . .	.91%	P 247C . . . . .	.77%
P 114C . . . . .	.92%	P 161C . . . . .	.20%	P 193C . . . . .	.67%	P 248C . . . . .	.50%
P 115C . . . . .	.92%	P 1555C . . . . .	.92%	P 194C . . . . .	.47%	P 249C . . . . .	.32%
P 116C . . . . .	.92%	P 1565C . . . . .	.92%	P 195C . . . . .	.27%	P 250C . . . . .	.91%
P 117C . . . . .	.63%	P 1575C . . . . .	.91%	P 196C . . . . .	.91%	P 251C . . . . .	.91%
P 118C . . . . .	.55%	P 1585C . . . . .	.91%	P 197C . . . . .	.91%	P 252C . . . . .	.91%
P 119C . . . . .	.28%	P 1595C . . . . .	.91%	P 198C . . . . .	.91%	Purple C . . . . .	.91%
P 120C . . . . .	.92%	P 1605C . . . . .	.74%	P 199C . . . . .	.91%	P 253C . . . . .	.86%
P 121C . . . . .	.92%	P 1615C . . . . .	.32%	P 200C . . . . .	.73%	P 254C . . . . .	.62%
P 122C . . . . .	.92%	P 162C . . . . .	.91%	P 201C . . . . .	.54%	P 255C . . . . .	.37%
P 123C . . . . .	.92%	P 163C . . . . .	.92%	P 202C . . . . .	.39%	P 256C . . . . .	.75%
P 124C . . . . .	.76%	P 164C . . . . .	.92%	P 203C . . . . .	.91%	P 257C . . . . .	.70%
P 125C . . . . .	.52%	P 165C . . . . .	.92%	P 204C . . . . .	.91%	P 258C . . . . .	.55%
P 126C . . . . .	.41%	P 166C . . . . .	.77%	P 205C . . . . .	.91%	P 259C . . . . .	.35%
P 127C . . . . .	.92%	P 167C . . . . .	.51%	P 206C . . . . .	.91%	P 260C . . . . .	.33%
P 128C . . . . .	.92%	P 168C . . . . .	.17%	P 207C . . . . .	.91%	P 261C . . . . .	.23%
P 129C . . . . .	.92%	P 1625C . . . . .	.92%	P 208C . . . . .	.52%	P 262C . . . . .	.23%
P 130C . . . . .	.92%	P 1635C . . . . .	.92%	P 209C . . . . .	.36%	P 2563C . . . . .	.84%
P 131C . . . . .	.74%	P 1645C . . . . .	.92%	P 210C . . . . .	.91%	P 2573C . . . . .	.82%
P 132C . . . . .	.45%	P 1655C . . . . .	.92%	P 211C . . . . .	.91%	P 2583C . . . . .	.62%
P 133C . . . . .	.22%	P 1665C . . . . .	.91%	P 212C . . . . .	.91%	P 2593C . . . . .	.59%
P 134C . . . . .	.92%	P 1675C . . . . .	.60%	P 216C . . . . .	.29%	P 2603C . . . . .	.45%
P 135C . . . . .	.92%	P 1685C . . . . .	.32%	P 217C . . . . .	.91%	P 2613C . . . . .	.46%

Note: Variance +/- 3%

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P 2623C	.47%	P 301C	.0%	P 3268C	.7%	P 379C	.69%
P 2567C	.68%	P 302C	.0%	P 3278C	.3%	P 380C	.64%
P 2577C	.64%	P 303C	.1%	P 3288C	.2%	P 381C	.57%
P 2587C	.55%	P 2975C	.44%	P 3298C	.1%	P 382C	.45%
P 2597C	.47%	P 2985C	.16%	P 3308C	.0%	P 383C	.36%
P 2607C	.47%	P 2995C	.7%	P 331C	.46%	P 384C	.27%
P 2617C	.34%	P 3005C	.1%	P 332C	.35%	P 385C	.15%
P 2627C	.36%	P 3015C	.0%	P 333C	.20%	P 386C	.62%
P 263C	.86%	P 3025C	.0%	Green C	.0%	P 387C	.57%
P 264C	.69%	P 3035C	.0%	P 334C	.0%	P 388C	.53%
P 265C	.46%	P 304C	.46%	P 335C	.0%	P 389C	.47%
P 266C	.26%	P 305C	.23%	P 336C	.1%	P 390C	.36%
P 267C	.22%	P 306C	.14%	P 337C	.46%	P 391C	.25%
P 268C	.30%	Process Blue	.0%	P 338C	.29%	P 392C	.17%
P 269C	.34%	P 307C	.1%	P 339C	.10%	P 393C	.68%
P 2635C	.70%	P 308C	.0%	P 340C	.4%	P 394C	.64%
P 2645C	.70%	P 309C	.0%	P 341C	.2%	P 395C	.61%
P 2655C	.65%	P 310C	.26%	P 342C	.2%	P 396C	.54%
P 2665C	.74%	P 311C	.16%	P 343C	.1%	P 397C	.38%
Violet C	.41%	P 312C	.5%	P 3375C	.33%	P 398C	.30%
P 2685C	.60%	P 313C	.0%	P 3385C	.19%	P 399C	.24%
P 2695C	.24%	P 314C	.0%	P 3395C	.8%	P 3935C	.67%
P 270C	.53%	P 315C	.0%	P 3405C	.1%	P 3945C	.64%
P 271C	.41%	P 316C	.1%	P 3415C	.1%	P 3955C	.61%
P 272C	.26%	P 3105C	.31%	P 3425C	.0%	P 3965C	.57%
P 273C	.4%	P 3115C	.16%	P 3434C	.0%	P 3975C	.34%
P 274C	.4%	P 3125C	.8%	P 344C	.51%	P 3985C	.23%
P 275C	.3%	P 3135C	.1%	P 345C	.38%	P 3995C	.11%
P 276C	.3%	P 3145C	.0%	P 346C	.24%	P 400C	.47%
P 2705C	.50%	P 3155C	.0%	P 347C	.4%	P 401C	.43%
P 2715C	.33%	P 3165C	.0%	P 348C	.3%	P 402C	.33%
P 2725C	.23%	P 317C	.58%	P 349C	.3%	P 403C	.24%
P 2735C	.8%	P 318C	.35%	P 350C	.2%	P 404C	.15%
P 2745C	.7%	P 319C	.17%	P 351C	.47%	P 405C	.11%
P 2755C	.5%	P 320C	.1%	P 352C	.42%	Black C	.5%
P 2765C	.3%	P 321C	.0%	P 353C	.26%	P 413C	.47%
P 272C	.55%	P 322C	.1%	P 354C	.2%	P 414C	.36%
P 278C	.38%	P 323C	.0%	P 355C	.2%	P 415C	.30%
P 279C	.17%	P 324C	.49%	P 356C	.1%	P 416C	.17%
Reflex Blue C	.1%	P 325C	.23%	P 357C	.2%	P 417C	.15%
P 280C	.0%	P 326C	.8%	P 358C	.25%	P 418C	.8%
P 281C	.0%	P 327C	.1%	P 359C	.36%	P 419C	.2%
P 282C	.0%	P 328C	.0%	P 360C	.22%	P 420C	.52%
P 283C	.45%	P 329C	.0%	P 361C	.11%	P 421C	.42%
P 284C	.28%	P 330C	.2%	P 362C	.10%	P 422C	.35%
P 285C	.7%	P 3242C	.31%	P 363C	.10%	P 423C	.25%
P 286C	.1%	P 3252C	.20%	P 364C	.7%	P 424C	.15%
P 287C	.0%	P 3262C	.7%	P 365C	.61%	P 425C	.10%
P 288C	.0%	P 3272C	.1%	P 366C	.59%	P 426C	.3%
P 289C	.0%	P 3282C	.0%	P 367C	.40%	P 427C	.59%
P 290C	.53%	P 3292C	.0%	P 368C	.21%	P 428C	.47%
P 291C	.34%	P 3302C	.0%	P 369C	.14%	P 429C	.39%
P 292C	.23%	P 3245C	.30%	P 370C	.12%	P 430C	.26%
P 293C	.1%	P 3255C	.18%	P 371C	.8%	P 431C	.15%
P 294C	.1%	P 3265C	.7%	P 372C	.56%	P 432C	.9%
P 295C	.0%	P 3275C	.2%	P 373C	.50%	P 433C	.5%
P 296C	.0%	P 3285C	.1%	P 374C	.40%	P 434C	.56%
P 297C	.33%	P 3295C	.1%	P 375C	.24%	P 435C	.48%
P 298C	.16%	P 3305C	.2%	P 376C	.20%	P 436C	.37%
P 299C	.7%	P 3248C	.33%	P 377C	.16%	P 437C	.17%
P 300C	.0%	P 3258C	.20%	P 378C	.8%	P 438C	.7%

Note: Variance +/- 3%

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P 439C	.3%	P 4645C	.33%	P 511C	.8%	P 552C	.53%
P 440C	.4%	P 4655C	.49%	P 512C	.13%	P 5463C	.0%
P 441C	.53%	P 4665C	.57%	P 513C	.19%	P 5473C	.4%
P 442C	.39%	P 4675C	.65%	P 514C	.51%	P 5483C	.12%
P 443C	.29%	P 4685C	.71%	P 515C	.64%	P 5493C	.21%
P 444C	.19%	P 469C	.11%	P 516C	.69%	P 5503C	.36%
P 445C	.4%	P 470C	.26%	P 517C	.72%	P 5513C	.51%
P 446C	.4%	P 471C	.44%	P 5115C	.8%	P 5523C	.59%
P 447C	.4%	P 472C	.69%	P 5125C	.15%	P 5467C	.1%
WarmGrey 1C	.57%	P 473C	.72%	P 5135C	.25%	P 5477C	.7%
WarmGrey 2C	.50%	P 474C	.76%	P 5145C	.36%	P 5487C	.19%
WarmGrey 3C	.45%	P 475C	.77%	P 5155C	.48%	P 5497C	.33%
WarmGrey 4C	.38%	P 4695C	.7%	P 5165C	.56%	P 5507C	.46%
WarmGrey 5C	.37%	P 4705C	.20%	P 5175C	.60%	P 5517C	.54%
WarmGrey 6C	.38%	P 4715C	.30%	P 518C	.6%	P 5527C	.63%
WarmGrey 7C	.30%	P 4725C	.42%	P 519C	.10%	P 553C	.7%
WarmGrey 8C	.29%	P 4735C	.54%	P 520C	.14%	P 554C	.7%
WarmGrey 9C	.21%	P 4745C	.60%	P 521C	.42%	P 555C	.9%
WarmGrey 10C	.20%	P 4755C	.71%	P 522C	.52%	P 556C	.35%
Warm Grey 11C	.17%	P 476C	.12%	P 523C	.60%	P 557C	.49%
Cool Grey 1C	.72%	P 477C	.16%	P 524C	.66%	P 558C	.58%
Cool Grey 2C	.65%	P 478C	.23%	P 5185C	.3%	P 559C	.63%
Cool Grey 3C	.58%	P 479C	.53%	P 5195C	.7%	P 5535C	.0%
Cool Grey 4C	.52%	P 480C	.69%	P 5205C	.18%	P 5545C	.5%
Cool Grey 5C	.46%	P 481C	.74%	P 5215C	.33%	P 5555C	.15%
Cool Grey 6C	.40%	P 482C	.76%	P 5225C	.44%	P 5565C	.22%
Cool Grey 7C	.34%	P 483C	.13%	P 5235C	.58%	P 5575C	.35%
Cool Grey 8C	.29%	P 484C	.34%	P 5245C	.68%	P 5585C	.42%
Cool Grey 9C	.29%	P 485C	.74%	P 525C	.7%	P 5595C	.52%
Cool Grey 10C	.16%	P 486C	.77%	P 526C	.13%	P 560C	.1%
Cool Grey 11C	.13%	P 487C	.78%	P 527C	.18%	P 561C	.2%
P 448C	.7%	P 488C	.78%	P 528C	.48%	P 562C	.2%
P 449C	.11%	P 489C	.78%	P 529C	.60%	P 563C	.22%
P 450C	.18%	P 490C	.7%	P 530C	.64%	P 564C	.29%
P 451C	.45%	P 491C	.16%	P 531C	.70%	P 565C	.41%
P 452C	.59%	P 492C	.21%	P 532C	.3%	P 566C	.54%
P 453C	.63%	P 493C	.51%	P 533C	.4%	P 5605C	.3%
P 454C	.68%	P 494C	.67%	P 534C	.6%	P 5615C	.9%
P 4485C	.8%	P 495C	.69%	P 535C	.33%	P 5625C	.19%
P 4495C	.19%	P 496C	.74%	P 536C	.43%	P 5635C	.36%
P 4505C	.33%	P 497C	.4%	P 537C	.55%	P 5645C	.46%
P 4515C	.43%	P 498C	.7%	P 538C	.62%	P 5655C	.54%
P 4525C	.55%	P 499C	.13%	P 539C	.5%	P 5665C	.60%
P 4535C	.64%	P 500C	.42%	P 541C	.6%	P 567C	.1%
P 4545C	.68%	P 501C	.61%	P 542C	.23%	P 568C	.1%
P 455C	.13%	P 502C	.67%	P 543C	.33%	P 569C	.1%
P 456C	.30%	P 503C	.69%	P 544C	.42%	P 570C	.21%
P 457C	.43%	P 4975C	.3%	P 545C	.50%	P 571C	.35%
P 458C	.69%	P 4985C	.15%	P 5395C	.1%	P 572C	.41%
P 459C	.74%	P 4995C	.26%	P 5405C	.10%	P 573C	.49%
P 460C	.73%	P 5005C	.37%	P 5415C	.16%	P 574C	.10%
P 461C	.77%	P 5015C	.50%	P 5425C	.27%	P 575C	.15%
P 462C	.10%	P 5025C	.57%	P 5435C	.25%	P 576C	.21%
P 463C	.23%	P 5035C	.66%	P 5445C	.56%	P 577C	.51%
P 464C	.29%	P 504C	.7%	P 5455C	.63%	P 578C	.57%
P 465C	.33%	P 505C	.15%	P 546C	.1%	P 579C	.64%
P 466C	.65%	P 506C	.21%	P 547C	.1%	P 580C	.67%
P 467C	.69%	P 507C	.51%	P 548C	.1%	P 5743C	.7%
P 468C	.72%	P 508C	.64%	P 549C	.23%	P 5753C	.12%
P 4625C	.6%	P 509C	.70%	P 550C	.31%	P 5763C	.20%
P 4635C	.20%	P 510C	.75%	P 551C	.41%	P 5773C	.33%

Note: Variance +/- 3%

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P 5783C	45%	P 1355U	.77%	P 202U	.22%	P 261U	.15%
P 5793C	.58%	P 1365U	.79%	P 203U	.72%	P 262U	.13%
P 5703C	.64%	P 1375U	.76%	P 204U	.73%	P 2563U	.73%
P 5747C	.3%	P 1385U	.49%	P 205U	.73%	P 2573U	.62%
P 5757C	.10%	P 1395U	.23%	P 206U	.71%	P 2583U	.56%
P 5767C	.22%	P 1405U	.15%	P 207U	.38%	P 2593U	.40%
P 5777C	.35%	P 141U	.69%	P 208U	.21%	P 2603U	.34%
P 5787C	.49%	P 142U	.72%	P 209U	.17%	P 2613U	.26%
P 5797C	.58%	P 143U	.71%	P 210U	.83%	P 2623U	.19%
P 5807C	.63%	P 144U	.73%	P 211U	.85%	P 2567U	.67%
P 581C	.11%	P 145U	.47%	P 212U	.85%	P 2577U	.58%
P 582C	.22%	P 146U	.23%	P 213U	.83%	P 2587U	.49%
P 583C	.38%	P 147U	.12%	P 214U	.51%	P 2597U	.31%
P 584C	.61%	P 148U	.71%	P 215U	.29%	P 2607U	.31%
P 585C	.67%	P 149U	.71%	P 216U	.17%	P 2617U	.25%
P 586C	.68%	P 150U	.73%	P 217U	.85%	P 2627U	.18%
P 587C	.72%	P 151U	.74%	P 218U	.86%	P 263U	.73%
P 801C	.7%	P 152U	.47%	P 219U	.76%	P 264U	.57%
P 802C	.29%	P 153U	.28%	Rubine Red U	.76%	P 265U	.35%
P 803C	.71%	P 154U	.20%	P 220U	.39%	P 266U	.24%
P 804C	.71%	P 155U	.70%	P 221U	.32%	P 267U	.20%
P 805C	.69%	P 156U	.70%	P 222U	.16%	P 268U	.18%
P 806C	.70%	P 157U	.71%	P 223U	.83%	P 269U	.14%
P 807C	.50%	P 158U	.71%	P 224U	.80%	P 2635U	.63%
P 871C	.15%	P 159U	.49%	P 225U	.83%	P 2645U	.53%
P 872C	.14%	P 160U	.24%	P 226U	.83%	P 2655U	.45%
P 873C	.15%	P 161U	.13%	P 227U	.41%	P 2665U	.36%
P 874C	.18%	P 176U	.86%	P 228U	.21%	Violet U	.26%
P 875C	.19%	P 177U	.86%	P 229U	.13%	P 2685U	.22%
P 876C	.15%	P 178U	.86%	P 230U	.84%	P 2695U	.17%
P 877C	.17%	Warm Red U	.86%	P 231U	.83%	P 270U	.45%
Yellow U	.79%	P 179U	.53%	Rhod. Red U	.83%	P 271U	.34%
WarmRed U	.79%	P 180U	.31%	P 233U	.51%	P 272U	.26%
Rubine Red U	.79%	P 181U	.17%	P 234U	.26%	P 273U	.13%
Rhod. Red U	.76%	P 1765U	.86%	P 235U	.17%	P 274U	.12%
Purple U	.79%	P 1775U	.86%	P 236U	.82%	P 275U	.11%
Violet U	.25%	P 1785U	.86%	P 237U	.80%	P 276U	.10%
Reflex Blue U	.6%	P 1788U	.86%	P 238U	.82%	P 2705U	.47%
Process Blue U	.7%	P 1795U	.63%	P 239U	.81%	P 2715U	.36%
Green U	.7%	P 1805U	.33%	P 240U	.47%	P 2725U	.24%
Yellow 012U	.79%	P 1815U	.21%	P 241U	.30%	P 2735U	.19%
Orange 021U	.79%	P 182U	.86%	P 242U	.16%	P 2745U	.15%
Red 032U	.76%	P 183U	.86%	P 243U	.80%	P 2755U	.15%
Blue 072U	.5%	P 184U	.86%	P 244U	.81%	P 2765U	.14%
Process Yellow U	.79%	P 185U	.86%	P 245U	.79%	P 277U	.46%
Process Magenta U	.79%	P 186U	.58%	P 246U	.75%	P 278U	.37%
Process Cyan U	.7%	P 187U	.32%	P 247U	.53%	P 279U	.21%
Process Black U	.4%	P 188U	.18%	P 248U	.28%	Reflex B U	.8%
P 100U	.79%	P 189U	.72%	P 249U	.14%	P 280U	.8%
P 101U	.79%	P 190U	.72%	P 250U	.84%	P 281U	.9%
P 102U	.79%	P 191U	.74%	P 251U	.83%	P 282U	.8%
Yellow U	.79%	P 192U	.72%	P 252U	.80%	P 283U	.39%
P 103U	.46%	P 193U	.39%	Purple U	.79%	P 284U	.29%
P 104U	.27%	P 194U	.24%	P 253U	.60%	P 285U	.15%
P 105U	.15%	P 195U	.14%	P 254U	.37%	P 286U	.8%
P 106U	.79%	P 196U	.71%	P 255U	.19%	P 287U	.8%
P 107U	.79%	P 197U	.74%	P 256U	.60%	P 288U	.7%
P 108U	.79%	P 198U	.72%	P 257U	.53%	P 289U	.8%
P 109U	.78%	P 199U	.72%	P 258U	.32%	P 290U	.43%
P 110U	.44%	P 200U	.53%	P 259U	.19%	P 291U	.28%
P 1345U	.75%	P 201U	.30%	P 260U	.15%	P 292U	.21%

Note: Variance +/- 3%

P 293U .....	.9%	P 3255U .....	.16%	P 372U .....	.61%	P 425U .....	.14%
P 294U .....	.9%	P 3265U .....	.13%	P 373U .....	.54%	P 426U .....	.7%
P 295U .....	.8%	P 3275U .....	.8%	P 374U .....	.45%	P 427U .....	.54%
P 296U .....	.9%	P 3285U .....	.9%	P 375U .....	.23%	P 428U .....	.42%
P 297U .....	.31%	P 3295U .....	.9%	P 376U .....	.19%	P 429U .....	.33%
P 298U .....	.19%	P 3305U .....	.8%	P 377U .....	.18%	P 430U .....	.23%
P 299U .....	.13%	P 3248U .....	.31%	P 378U .....	.14%	P 431U .....	.16%
P 300U .....	.8%	P 3258U .....	.21%	P 379U .....	.72%	P 432U .....	.11%
P 301U .....	.9%	P 3268U .....	.15%	P 380U .....	.65%	P 433U .....	.8%
P 302U .....	.9%	P 3278U .....	.12%	P 381U .....	.51%	P 434U .....	.15%
P 303U .....	.8%	P 3288U .....	.12%	P 382U .....	.28%	P 435U .....	.34%
P 2975U .....	.37%	P 3298U .....	.11%	P 383U .....	.34%	P 436U .....	.24%
P 2985U .....	.23%	P 3308U .....	.10%	P 384U .....	.26%	P 437U .....	.14%
P 2995U .....	.14%	P 331U .....	.43%	P 385U .....	.20%	P 438U .....	.10%
P 3005U .....	.8%	P 332U .....	.32%	P 386U .....	.74%	P 439U .....	.9%
P 3015U .....	.9%	P 333U .....	.16%	P 387U .....	.67%	P 440U .....	.8%
P 3025U .....	.8%	Green U .....	.6%	P 388U .....	.55%	P 441U .....	.41%
P 3035U .....	.9%	P 334U .....	.5%	P 389U .....	.39%	P 442U .....	.29%
P 304U .....	.39%	P 335U .....	.7%	P 390U .....	.34%	P 443U .....	.23%
P 305U .....	.23%	P 336U .....	.8%	P 391U .....	.25%	P 444U .....	.15%
P 306U .....	.20%	P 337U .....	.41%	P 392U .....	.19%	P 445U .....	.9%
Process Blue U .....	.9%	P 338U .....	.26%	P 393U .....	.82%	P 446U .....	.23%
P 307U .....	.8%	P 339U .....	.15%	P 394U .....	.77%	P 447U .....	.7%
P 308U .....	.8%	P 340U .....	.9%	P 395U .....	.72%	Warm Grey 10U .....	.66%
P 309U .....	.8%	P 341U .....	.11%	P 396U .....	.58%	Warm Grey 20U .....	.58%
P 310U .....	.24%	P 342U .....	.10%	P 397U .....	.37%	Warm Grey 30U .....	.45%
P 311U .....	.14%	P 3375U .....	.32%	P 398U .....	.31%	Warm Grey 40U .....	.39%
P 312U .....	.12%	P 3385U .....	.21%	P 399U .....	.27%	Warm Grey 50U .....	.36%
P 313U .....	.9%	P 3395U .....	.14%	P 3935U .....	.85%	Warm Grey 60U .....	.27%
P 314U .....	.7%	P 3405U .....	.9%	P 3945U .....	.83%	Warm Grey 70U .....	.23%
P 315U .....	.7%	P 3415U .....	.7%	P 3955U .....	.79%	Warm Grey 80U .....	.20%
P 316U .....	.8%	P 3425U .....	.7%	P 3965U .....	.70%	Warm Grey 90U .....	.17%
P 3105U .....	.31%	P 3435U .....	.6%	P 3975U .....	.38%	Warm Grey 100U .....	.15%
P 3115U .....	.20%	P 344U .....	.46%	P 3985U .....	.23%	Warm Grey 110U .....	.14%
P 3125U .....	.14%	P 345U .....	.36%	P 3995U .....	.16%	Cool Grey 10U .....	.67%
P 3135U .....	.8%	P 346U .....	.27%	P 400U .....	.53%	Cool Grey 20U .....	.60%
P 3145U .....	.10%	P 347U .....	.11%	P 401U .....	.43%	Cool Grey 30U .....	.53%
P 3155U .....	.8%	P 348U .....	.9%	P 402U .....	.34%	Cool Grey 40U .....	.44%
P 3165U .....	.8%	P 349U .....	.10%	P 403U .....	.28%	Cool Grey 50U .....	.39%
P 317U .....	.47%	P 350U .....	.9%	P 404U .....	.21%	Cool Grey 60U .....	.31%
P 318U .....	.29%	P 351U .....	.39%	P 405U .....	.14%	Cool Grey 70U .....	.29%
P 319U .....	.19%	P 352U .....	.32%	Black U .....	.8%	Cool Grey 80U .....	.23%
P 320U .....	.8%	P 353U .....	.20%	P 406U .....	.53%	Cool Grey 90U .....	.20%
P 321U .....	.7%	P 354U .....	.7%	P 407U .....	.44%	Cool Grey 100U .....	.18%
P 322U .....	.8%	P 355U .....	.8%	P 408U .....	.34%	Cool Grey 110U .....	.15%
P 323U .....	.7%	P 356U .....	.8%	P 409U .....	.27%	P 448U .....	.12%
P 324U .....	.40%	P 357U .....	.9%	P 410U .....	.22%	P 449U .....	.15%
P 325U .....	.21%	P 358U .....	.46%	P 411U .....	.13%	P 450U .....	.18%
P 326U .....	.14%	P 359U .....	.40%	P 412U .....	.9%	P 451U .....	.34%
P 327U .....	.9%	P 360U .....	.25%	P 413U .....	.48%	P 452U .....	.50%
P 328U .....	.9%	P 361U .....	.21%	P 414U .....	.44%	P 453U .....	.63%
P 329U .....	.9%	P 362U .....	.18%	P 415U .....	.32%	P 454U .....	.68%
P 330U .....	.10%	P 363U .....	.15%	P 416U .....	.23%	P 4485U .....	.17%
P 3242U .....	.26%	P 364U .....	.14%	P 417U .....	.19%	P 4495U .....	.24%
P 3252U .....	.20%	P 365U .....	.60%	P 418U .....	.12%	P 4505U .....	.37%
P 3262U .....	.13%	P 366U .....	.50%	P 419U .....	.6%	P 4515U .....	.49%
P 3272U .....	.9%	P 367U .....	.40%	P 420U .....	.49%	P 4525U .....	.60%
P 3282U .....	.8%	P 368U .....	.22%	P 421U .....	.47%	P 4535U .....	.70%
P 3292U .....	.7%	P 369U .....	.19%	P 422U .....	.35%	P 4545U .....	.74%
P 3302U .....	.7%	P 370U .....	.19%	P 423U .....	.26%	P 455U .....	.18%
P 3245U .....	.28%	P 371U .....	.14%	P 424U .....	.19%	P 456U .....	.26%

Note: Variance +/- 3%

P 457U .....	.42%	P 503U .....	.70%	P 536U .....	.40%	P 5625U .....	.20%
P 458U .....	.66%	P 4975U .....	.10%	P 537U .....	.49%	P 5635U .....	.28%
P 459U .....	.71%	P 4985U .....	.22%	P 538U .....	.60%	P 5645U .....	.40%
P 460U .....	.80%	P 4995U .....	.30%	P 539U .....	.8%	P 5655U .....	.52%
P 461U .....	.83%	P 5005U .....	.42%	P 540U .....	.8%	P 5665U .....	.64%
P 462U .....	.13%	P 5015U .....	.56%	P 541U .....	.9%	P 567U .....	.8%
P 463U .....	.20%	P 5025U .....	.64%	P 542U .....	.21%	P 568U .....	.9%
P 464U .....	.26%	P 5035U .....	.74%	P 543U .....	.29%	P 569U .....	.8%
P 465U .....	.51%	P 504U .....	.10%	P 544U .....	.40%	P 570U .....	.19%
P 466U .....	.60%	P 505U .....	.17%	P 545U .....	.55%	P 571U .....	.31%
P 467U .....	.70%	P 506U .....	.23%	P 5395U .....	.65%	P 572U .....	.38%
P 468U .....	.76%	P 507U .....	.45%	P 5405U .....	.10%	P 573U .....	.49%
P 4625U .....	.14%	P 508U .....	.51%	P 5415U .....	.17%	P 574U .....	.14%
P 4635U .....	.20%	P 509U .....	.61%	P 5425U .....	.23%	P 575U .....	.19%
P 4645U .....	.36%	P 510U .....	.66%	P 5435U .....	.38%	P 576U .....	.23%
P 4655U .....	.47%	P 511U .....	.12%	P 5445U .....	.51%	P 577U .....	.40%
P 4665U .....	.63%	P 512U .....	.16%	P 5455U .....	.60%	P 578U .....	.53%
P 4675U .....	.74%	P 513U .....	.24%	P 546U .....	.9%	P 579U .....	.59%
P 4685U .....	.79%	P 514U .....	.45%	P 547U .....	.10%	P 580U .....	.68%
P 469U .....	.15%	P 515U .....	.59%	P 548U .....	.10%	P 5743U .....	.11%
P 470U .....	.27%	P 516U .....	.71%	P 549U .....	.26%	P 5753U .....	.16%
P 471U .....	.41%	P 517U .....	.79%	P 550U .....	.35%	P 5763U .....	.20%
P 472U .....	.65%	P 5115U .....	.11%	P 551U .....	.45%	P 5773U .....	.32%
P 473U .....	.74%	P 5125U .....	.18%	P 552U .....	.54%	P 5783U .....	.42%
P 474U .....	.79%	P 5135U .....	.27%	P 5463U .....	.6%	P 5793U .....	.55%
P 475U .....	.84%	P 5145U .....	.40%	P 5473U .....	.10%	P 5803U .....	.62%
P 4695U .....	.14%	P 5155U .....	.51%	P 5483U .....	.15%	P 5747U .....	.9%
P 4705U .....	.22%	P 5165U .....	.65%	P 5493U .....	.21%	P 5757U .....	.16%
P 4715U .....	.30%	P 5175U .....	.76%	P 5503U .....	.36%	P 5767U .....	.22%
P 4725U .....	.46%	P 518U .....	.11%	P 5513U .....	.52%	P 5777U .....	.33%
P 4735U .....	.57%	P 519U .....	.13%	P 5523U .....	.64%	P 5787U .....	.44%
P 4745U .....	.65%	P 520U .....	.19%	P 5467U .....	.8%	P 5797U .....	.55%
P 4755U .....	.73%	P 521U .....	.40%	P 5477U .....	.13%	P 5807U .....	.62%
P 476U .....	.15%	P 522U .....	.51%	P 5487U .....	.20%	P 581U .....	.16%
P 477U .....	.22%	P 523U .....	.61%	P 5497U .....	.30%	P 582U .....	.23%
P 478U .....	.27%	P 524U .....	.70%	P 5507U .....	.38%	P 583U .....	.36%
P 479U .....	.50%	P 5185U .....	.10%	P 5517U .....	.50%	P 584U .....	.60%
P 480U .....	.66%	P 5195U .....	.14%	P 5527U .....	.63%	P 585U .....	.67%
P 481U .....	.76%	P 5205U .....	.26%	P 553U .....	.10%	P 586U .....	.71%
P 482U .....	.81%	P 5215U .....	.39%	P 554U .....	.13%	P 587U .....	.78%
P 483U .....	.14%	P 5225U .....	.49%	P 555U .....	.16%	P 5815U .....	.13%
P 484U .....	.30%	P 5235U .....	.65%	P 556U .....	.9%	P 5825U .....	.20%
P 485U .....	.31%	P 5245U .....	.74%	P 557U .....	.37%	P 5835U .....	.27%
P 486U .....	.85%	P 525U .....	.12%	P 558U .....	.45%	P 5845U .....	.37%
P 486U .....	.85%	P 526U .....	.17%	P 559U .....	.52%	P 5855U .....	.52%
P 487U .....	.85%	P 527U .....	.25%	P 5535U .....	.6%	P 5865U .....	.61%
P 488U .....	.85%	P 528U .....	.47%	P 5545U .....	.10%	P 5875U .....	.65%
P 489U .....	.85%	P 529U .....	.61%	P 5555U .....	.17%	Pantone 801U .....	.6%
P 490U .....	.13%	P 530U .....	.69%	P 5565U .....	.26%	P 802U .....	.25%
P 491U .....	.18%	P 531U .....	.73%	P 5575U .....	.42%	P 803U .....	.85%
P 492U .....	.23%	P 5255U .....	.11%	P 5585U .....	.48%	P 804U .....	.85%
P 493U .....	.49%	P 5265U .....	.16%	P 5595U .....	.58%	P 805U .....	.84%
P 494U .....	.60%	P 5275U .....	.22%	P 560U .....	.6%	P 806U .....	.84%
P 495U .....	.68%	P 5285U .....	.35%	P 561U .....	.7%	P 807U .....	.53%
P 496U .....	.77%	P 5295U .....	.44%	P 562U .....	.8%	P 871U .....	.21%
P 497U .....	.9%	P 5305U .....	.57%	P 563U .....	.21%	P 872U .....	.21%
P 498U .....	.12%	P 5315U .....	.69%	P 564U .....	.28%	P 873U .....	.24%
P 499U .....	.16%	P 532U .....	.7%	P 565U .....	.40%	P 874U .....	.26%
P 500U .....	.35%	P 533U .....	.9%	P 566U .....	.46%	P 875U .....	.26%
P 501U .....	.51%	P 534U .....	.10%	P 5605U .....	.9%	P 876U .....	.23%
P 502U .....	.51%	P 535U .....	.29%	P 5615U .....	.12%	P 877U .....	.35%

Note: Variance +/- 3%