

Specialty Chemicals Heat Stable and Sublimable Dyes

## Your vision. Our experience. The perfect chemisty.

KODAK Specialty Chemicals is a U.S.-based facility with decades of experience in custom synthesis with high-quality production serving diverse markets and a long, trusted history of providing scale to innovation. Particularly with heterocycles and specialty polymers.









# Great ideas mean little without the capacity to execute them

Working with Kodak allows you to draw on our expertise in process development, design for manufacturing, and statistical process control. In other words, we can take a process from the "white board" into production.

We're flexible enough to produce the smallest and largest batch sizes, which gives you flexibility of choice. And our broad product portfolio includes 1,500 approved manufacturing processes. Plus, confidential custom manufacturing services are available.

## Great results give no advantage if they're not repeatable

A commitment to safety, health, the environment, high quality, and high technology are more than just our goals. They're part of our DNA. Kodak has designed and manufactured chemicals for over 100 years, a heritage we simply could not have built without a firm set of standards.

Our Six Sigma Black Belt focus on quality and decades of expertise with specialty chemicals development and manufacturing means Kodak knows how to get things right the first time, and get them right consistently, batch after batch.

## Great companies are judged by the relationships they build

A relationship with Kodak is a collaboration with a U.S. manufacturer that has global capabilities. It's a relationship built on a century-long tradition of making the complex simpler. And it's built on trust.

All statements, information, and data contained herein are believed to be accurate and reliable as of the date of publication. Kodak makes no representation or warranty expressed or implied including merchantability or fitness for particular purpose. Nothing contained herein shall be construed as conferring any license or other rights by implication, estoppel, or otherwise, under any patents, copyrights, trade secrets, trademarks, or other intellectual property rights regarding customers' use of Products or combination with other components or products. User is responsible for all essential process and material safety information.



## TYD87 (Product Code 1101476)

Yellow dye with absorption between 370 to 400 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

#### Properties: • MW 322

- Yellow to orange solid
- Exotherm onset temperature 290°C

UV: • Lambda max: 386 nm in methanol

• Absorptivity: 81 L/g cm

Solubility: Isopropanol, DMF, acetone

**Specifications:** • Assay by HPLC ≥ 96 Area%

0.9 0.8 0.7 0.6 Absorbance 0.5 0.4 0.3 0.2 0.1 0 зóо 4Ó0 700 5Ó0 6Ó0 800 200  $\lambda$ (nm)

\*Sample concentration: 9.87 mg/L in methanol

KODAK



## TYD57 (Product Code 1938521)

High purity yellow dye with peak absorption between 400 to 420 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

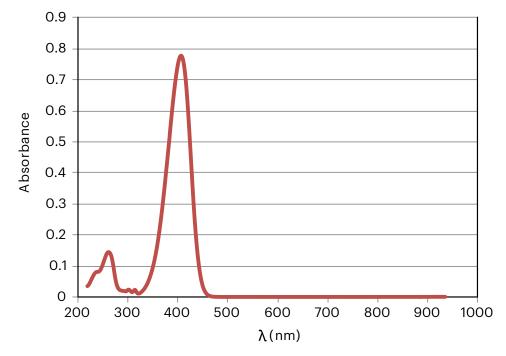
Properties: • MW 341

- Yellow solid
- Exotherm onset temperature 339°C

Solubility: Acetonitrile, isopropanol, methanol

**Specifications:** • Potency by UV/Vis ≥ 97 wt%

- UV: Lambda max: 407 nm in methanol
  - Absorptivity: 134 L/g cm



\*Sample concentration: 5.73 mg/L in methanol





## TYD31 (Product Code 1297829)

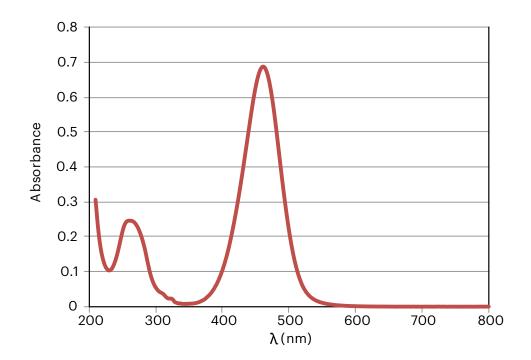
High purity yellow dye with peak absorption between 450 to 480 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 362

- MP 121-125°C
- Red to purple solid

- Solubility: Toluene, methyl ethyl ketone, cyclohexanone, methanol, acetone
- UV: Lambda max: 462 nm in methanol• Absorptivity: 158 L/g cm

Specifications: • Assay by HPLC ≥ 98 Area% • Volatiles ≤ 0.5 wt%



\*Sample concentration: 4.35 mg/L in methanol





## TYD97 (Product Code 1051200)

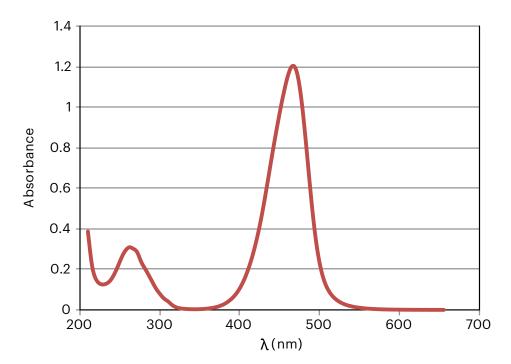
High purity yellow dye with high absorption between 450 to 480 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 400

- MP 145-149°C
- Red to purple solid

**UV:** • Lambda max: 467 nm in methanol • Absorptivity: 192 L/g cm **Solubility:** Toluene, methyl ethyl ketone, cyclohexanone, methanol, acetone

Specifications: • Potency by UV/Vis ≥ 97 wt% • Volatiles ≤ 1 wt%



\*Sample concentration: 6.29 mg/L in methanol





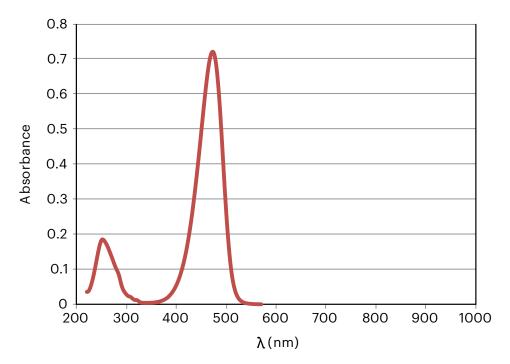
## TYD80 (Product Code 1758861)

High purity yellow dye with peak absorption between 460 to 480 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

**Properties:** • MW 335 • MP 234°C Solubility: Methanol, acetone

UV: • Lambda max: 472 nm in methanol• Absorptivity: 215 L/g cm

**Specifications:** • Assay by HPLC ≥ 97 Area% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 3.35 mg/L in methanol





## TYD23 (Product Code 1346014)

Yellow dye with peak absorption between 460 to 490 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

Properties: • MW 421

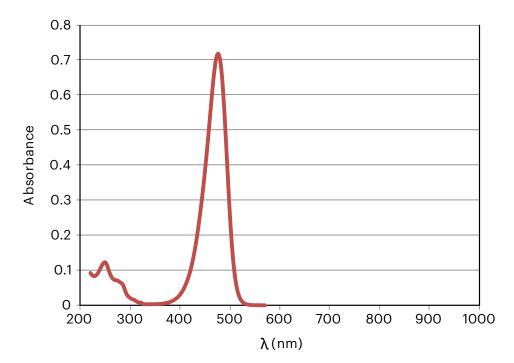
- MP 106°C
- Exotherm onset temperature 233°C

UV: • Lambda max: 467 nm in methanol

• Absorptivity: 202 L/g cm

Solubility: Methanol, DMF

Specifications: • Assay by HPLC ≥ 97 Area% • Volatiles ≤ 1 wt%



\*Sample concentration: 3.54 mg/L in methanol





## TMD96 (Product Code 1292473)

Magenta dye with peak absorption between 480 to 520 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

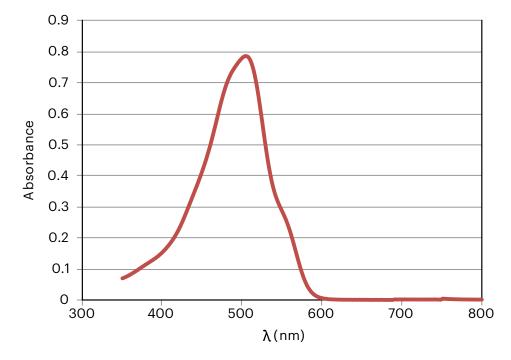
#### Properties: • MW 412

Orange solid

Solubility: Acetonitrile, acetic acid, acetone

Specifications: • Assay by HPLC ≥ 95 Area% • Volatiles ≤ 2.0 wt%

UV: • Lambda max: 505 nm in methanol



\*Sample concentration: 10mg/L in acetone





## TMD33 (Product Code 1090554)

High purity magenta dye with peak absorption between 520 to 550 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 359

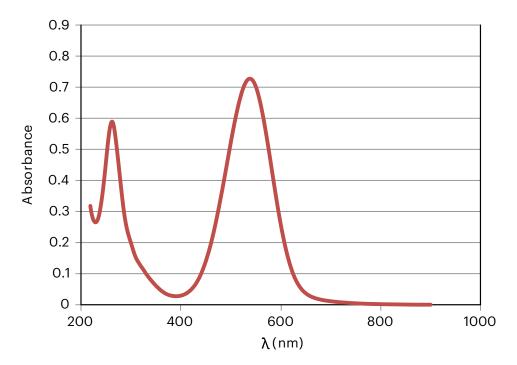
- MP 170-175°C
- Green solid

UV: • Lambda max: 539 nm in methanol

• Absorptivity: 86 L/g cm

**Solubility:** Toluene, methyl ethyl ketone, cyclohexanone, methanol

Specifications: • Assay by HPLC ≥ 98 Area% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 8.46 mg/L in methanol





## TMD21 (Product Code 1327014)

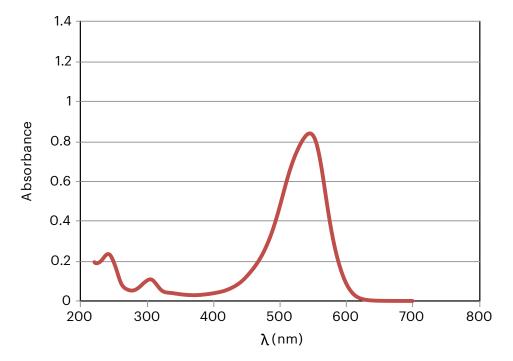
High purity magenta dye with high absorption between 500 to 575 nm. Good dye thermal transfer efficiency; compatible with binder; resistant to high temperatures. Soluble in many industrial solvents.

Properties: • MW 418

- MP 173°C
- Magenta solid
- **UV:** Lambda max: 545 nm in methanol • Absorptivity: 143 L/g cm

Solubility: Toluene, methyl ethyl ketone, cyclohexanone, methanol. Improved solubility with co-dye mixtures.

Specifications: • Potency by UV/Vis ≥ 99 Wt%
• Volatiles ≤ 1.0 wt%



\*Sample concentration: 5.87 mg/L in methanol





### TMD39 (Product Code 1893130)

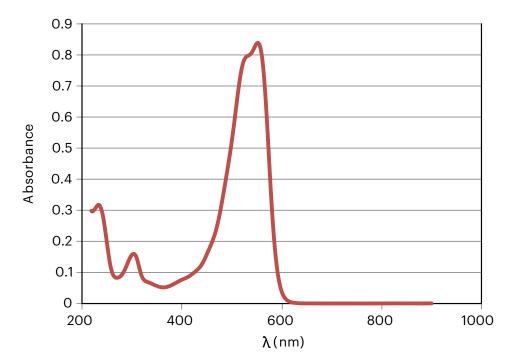
High purity magenta dye with peak absorption between 520 to 560 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 447

- MP 39-144°C
- Magenta to red solid
- Exotherm onset temperature 196°C
- UV: Lambda max: 545 nm in methanol
  - Absorptivity: 136 L/g cm

Solubility: Isopropanol, methanol, acetone

Specifications: • Potency by UV/Vis ≥ 98 Wt% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 8.65 mg/L in methanol







## TMD88 (Product Code 1041177)

Magenta dye with good absorption between 520 to 560 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

Properties: • MW 470

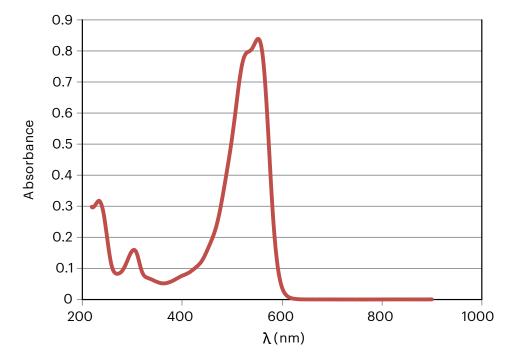
- Reddish to brown solid
- Decomposition temperature 211°C

UV: • Lambda max: 553 nm in methanol

• Absorptivity: 97 L/g cm

Solubility: THF, isopropyl ether, methanol

Specifications: • Potency by UV/Vis ≥ 92 Wt% • Volatiles ≤ 2.0 wt%



\*Sample concentration: 8.65 mg/L in methanol





## TMD71 (Product Code 1354927)

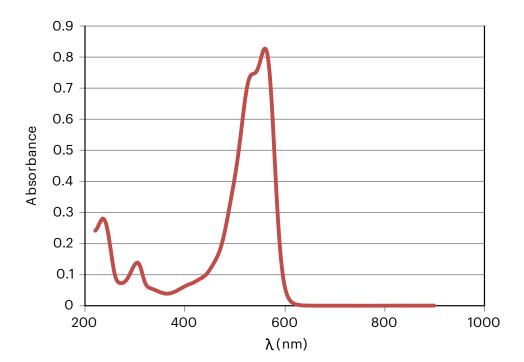
Magenta dye with good absorption between 530 to 570 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 498

- MP 118°C
- Decomposition onset 225°C

**UV:** • Lambda max: 561 nm in methanol • Absorptivity: 103 L/g cm **Solubility:** Isopropanol, toluene, methyl ethyl ketone, cyclohexanone, methanol

Specifications: • Potency by UV/Vis ≥ 95 Wt% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 8.07 mg/L in methanol







## **TCD39 (Product Code 1340405)**

High purity cyan dye with peak absorption between 590 to 640 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

Properties: • MW 402

- Dark green solid
- Exotherm onset temperature 136°C

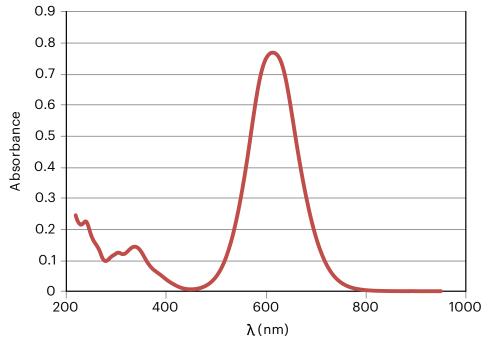
Specifications: • Potency by UV/Vis ≥ 98 Wt%

• Volatiles ≤ 1.0 wt%

Solubility: Acetonitrile, acetone, methanol

UV: • Lambda max: 613 nm in acetonitrile

• Absorptivity: 124 L/g cm



\*Sample concentration: 6.18 mg/L in acetonitrile





## TCD40 (Product Code 1988260)

High purity cyan dye with peak absorption between 610 to 655 nm. Good dye thermal transfer efficiency; resistant to high temperatures.

#### Properties: • MW 484

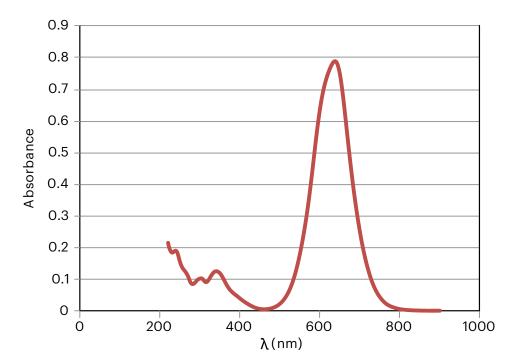
#### Solubility: Methanol

• MP 156°C • Green solid

- Specifications: Potency by UV/Vis ≥ 98 Wt% • Volatiles ≤ 1.0 wt%
- **UV:** Lambda max: 637 nm in methanol

• Exotherm onset temperature 192°C

• Absorptivity: 121 L/g cm



\*Sample concentration: 6.51 mg/L in methanol







## TCD79 (Product Code 1156561)

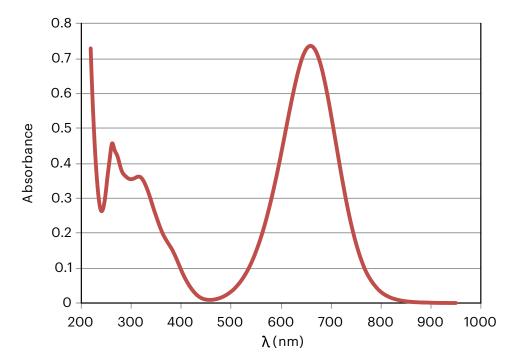
High purity cyan dye with peak absorption between 640 to 680 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 361

- MP 150°C
  - Blue solid
  - Exotherm onset temperature 158°C
- UV: Lambda max: 659 nm in acetonitrile
  - Absorptivity: 74 L/g cm

Solubility: Toluene, methyl ethyl ketone, cyclohexanone, acetonitrile, ethyl acetate

**Specifications:** • Potency by HPLC ≥ 98 Area% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 9.93 mg/L in acetonitrile





### **TCD533 (Product Code 1427558)**

Cyan dye with good absorption between 630 to 690 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

#### Properties: • MW 440

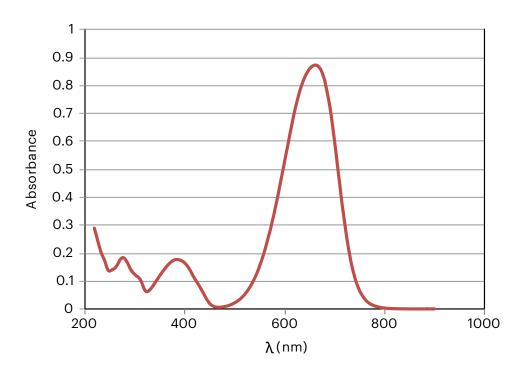
- Purple to dark blue solid
- Exotherm onset temperature 272°C

UV: • Lambda max: 662 nm in methanol

• Absorptivity: 114 L/g cm

**Solubility:** Toluene, methyl ethyl ketone, cyclohexanone, methanol, acetone

**Specifications:** • Potency by UV/Vis ≥ 96 Wt% • Volatiles ≤ 1.0 wt%



\*Sample concentration: 7.63 mg/L in methanol







## TCD79 (Product Code 1156561)

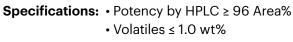
High purity cyan dye with peak absorption between 640 to 680 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

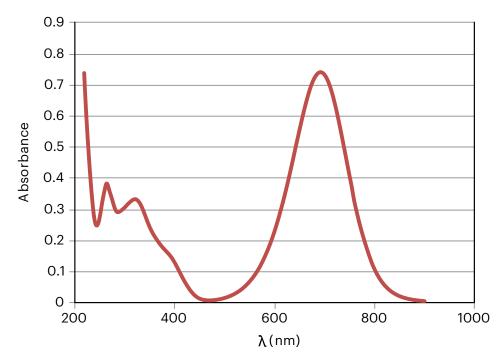
Properties: • MW 375

- MP 123°C
- Blue black solid
- Exotherm onset temperature 150°C

Solubility: Toluene, methyl ethyl ketone, cyclohexanone, methanol

- UV: Lambda max: 671 nm in methanol
  - Absorptivity: 74 L/g cm





\*Sample concentration: 9.40 mg/L in methanol





## TCD33 (Product Code 1477447)

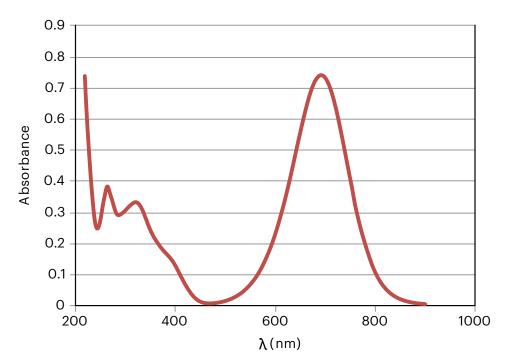
High purity cyan dye with high absorption between 650 to 730 nm. Good dye thermal transfer efficiency; resistant to high temperatures. Soluble in many industrial solvents.

Properties: • MW 375

- MP 137°C
- Blue/Dark Blue solid
- UV: Lambda max: 662 nm in methanol• Absorptivity: 79 L/g cm

**Solubility:** Isopropanol, toluene, methyl ethyl ketone, cyclohexanone, methanol

Specifications: • Potency by UV/Vis ≥ 98 Wt%



\*Sample concentration: 9.40 mg/L in methanol



## NOTES

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For further information please visit www.kodak.com/go/specialtychemicals or contact us at specialtychemicals@kodak.com.

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