**TECHNICAL SPECIFICATION OF BLUE 15: 0**

- **PRODUCT:**
  - (a) NAME : Pigment Phthalocynine Blue Alpha
  - (b) CHEMICAL CLASS : Phthalocynine
  - (c) CHEMICAL TYPE : Organic
  - (d) COLOR INDEX NAME : Pigment Blue 15:0
  - (e) COLOR INDEX NUMBER : 74160
  - (f) CAS REGISTOR NUMBER : 147-14-8
  - (g) FORMULA : $\text{C}_{32}\text{H}_{16}\text{CUN}_8$ (Mol wt. 576)

- **PHYSICAL PROPERTIES :**
  - (a) SPECIFIC GRAVITY (20' C) : 1.5
  - (b) OIL ABSORPTION : 37 cc.
  - (c) SIEVE RESIDUE (350 mesh) : 1 % max.
  - (d) MOISTURE CONTENT : 1 % max.
  - (e) WATER SOLUBLE : 1 % max.
  - (f) PH OF EQUEOUS Soln : 7

- **HEAT RESISTANCE :**
  - (a) 120 Centi. for 30 minutes : Stable
  - (b) 150 Centi. for 20 minutes : Stable
  - (c) 200 Centi. for 10 minutes : Stable

- **FASTNESS PROPERTIES : ( 1- 5 Scale : 1 Poor - 5 Excellent)***
  - Water : 5
  - Linseed Oil : 5
  - Butanol : 5
  - Xylene : 5
  - Butyl Acetate : 5
  - Acetone : 5
  - Ethanol : 5
  - Methyl Ethyl Ketone : 5
  - Menaral Turpentine : 5
  - 5% Soap Soln : 5

- **LIGHT FASTNESS : ( 1 - 8 Scale : 1 Very low - 8 Outstanding)**
  - 25% Shade : 8
  - 10% Shade : 8
  - 5% Shade : 8

- **APPLICATIONS :** Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

- **HAZARDOUS INGREDIENTS :** None

- **NOTES :** This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF BLUE 15: 3

- **PRODUCT:**
  - (a) **NAME** : Pigment Phthalocynine Blue Beta
  - (b) **CHEMICAL CLASS** : Phthalocynine
  - (c) **CHEMICAL TYPE** : Organic
  - (d) **COLOR INDEX NAME** : Pigment Blue 15 :3
  - (e) **COLOR INDEX NUMBER** : 74160
  - (f) **CAS NUMBER** : 147-14-8

- **PHYSICAL PROPERTIES :**
  - (a) **SPECIFIC GRAVITY (20' C)** : 1.5
  - (b) **OIL ABSORPTION** : 31 cc.
  - (c) **SIEVE RESIDUE (350 mesh)** : 1 % max.
  - (d) **MOISTURE CONTENT** : 1 % max.
  - (e) **WATER SOLUBLE** : 1 % max.
  - (f) **PH OF EQUEOUS Soln** : 7

- **HEAT RESISTANCE :**
  - (a) 120 Centi. for 30 minutes : Stable
  - (b) 150 Centi. for 20 minutes : Stable
  - (c) 200 Centi. for 10 minutes : Stable

- **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)
  - Water : 5  Acetone : 5
  - Linseed Oil : 5  Ethanol : 5
  - Butanol : 5  Methyl Ethyl Ketone : 5
  - Xylene : 5  Menaral Turpentine : 5
  - Butyl Acetate : 5  5% Soap Soln : 5

- **LIGHT FASTNESS** : ( 1 - 8 Scale : 1 Very low - 8 Outstanding)
  - 25% Shade : 8  10% Shade : 8  5% Shade : 8

- **APPLICATIONS**: Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

- **HAZARDOUS INGREDIENTS**: None

- **NOTES**: This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF BLUE 15: 4

- **PRODUCT:**
  - (a) **NAME** : Pigment Copper Phthalocynine Blue
  - (b) **CHEMICAL CLASS** : Phthalocynine
  - (c) **CHEMICAL TYPE** : Organic
  - (d) **COLOR INDEX NAME** : Pigment Blue 15: 4
  - (e) **COLOR INDEX NUMBER** : 74160
  - (f) **CAS NUMBER** : 147-14-8

- **PHYSICAL PROPERTIES:**
  - (a) **SPECIFIC GRAVITY (20' C)** : 1.5
  - (b) **OIL ABSORPTION** : 31 cc.
  - (c) **SIEVE RESIDUE (350 mesh)** : 1 % max.
  - (d) **MOISTURE CONTENT** : 1 % max.
  - (e) **WATER SOLUBLE** : 1 % max.
  - (f) **PH OF EQUEOUS Soln** : 7

- **HEAT RESISTANCE:**
  - (a) 120 Centi. for 30 minutes : Stable
  - (b) 150 Centi. for 20 minutes : Stable
  - (c) 200 Centi. for 10 minutes : Stable

- **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)
  - Water : 5
  - Linseed Oil : 5
  - Butanol : 5
  - Xylene : 5
  - Butyl Acetate : 5
  - Acetone : 5
  - Ethanol : 5
  - Methyl Ethyl Ketone : 5
  - Menaral Turpentine : 5
  - 5% Soap Soln : 5

- **LIGHT FASTNESS** : ( 1 - 8 Scale : 1 Very low - 8 Outstanding)
  - 25% Shade : 8
  - 10% Shade : 8
  - 5% Shade : 8

- **APPLICATIONS** : Paint, Printing ink, Flaxographics ink Color etc.

- **HAZARDOUS INGREDIENTS** : None

- **NOTES** :
  - This technical information is offered for guidance but without guarantee.
SPECIFICATION AND MATERIAL DATA SHEET

1) PRODUCT IDENTIFICATION

(A) PRODUCT NAME : PRUSIAN BLUE
(B) COLOR INDEX NAME : PIGMENT BLUE 27
(C) COLOR INDEX NO. : 77510, 77520
(D) APPEARANCE : BLUE POWDER

2) PHYSICAL DATA :

(A) FINENESS : RETENTION ON 240 MESH
SEIVE MAX.1%
PASSING THROUGH 240 MESH SIEVE
(B) OIL ABSORPTION : 85 ± 2
(C) SPECIFIC GRAVITY : 1.9
(D) BULK DENSITY : 0.4 KG / LITRE
(E) MOISTURE CONTENT : 3 TO 4% MAXIMUM
(F) PH VALUE : 4.5

3) STABILITY AND RESISTANCE

(A) WATER FASTNESS : GOOD
(B) ETHYL ALCOHOL : GOOD
(C) SOLVENT RESISTANCE : GOOD
(D) ALKALI RESISTANCE : POOR
(E) ACID RESISTANCE : GOOD

4) APPLICATION:

PAINT, PRINTING INK, LEATHER, LINOLIUM, CHALK & CRAYONS AND CARBON PAPER.

5) PACKING : 10 & 25 KG IN HDPE LAMINATED BAGS.

6) SAFETY AND HEALTH ASPECTS:

A VOIDED INHALATION OF THE PIGMENT KEEP AWAYS FROM DIRECT FIRE.
LONG EXPOSURE ON SKIN SHOULD BE AVOIDED, WATER IS THE MEDIA TO PUT OFF FIRE.

NOTE: IN CASE OF FIRE, THE FIRE FIGHTER MUST WEAR RESPIRATORY SAFETY EQUIPMENT.
TECHNICAL SPECIFICATION OF BLUE: 29

1. **Product Name** : Pigment Blue: 29
2. **Chemical Class** : Inorganic
3. **Color Index Number** : 77007
4. **Chemical Type** : Ultramarine Blue
5. **Color Index Name** : Pigment Blue: 29
6. **Cas Register Number** : ----
7. **Appearance** : Blue Powder
8. **Specific Gravity, G/Cm²** : 2.35
9. **Oil Absorption G/100 Gms** : 33.5%
10. **Light Fastness (1-8 Scale, 8- Best)**
    - Full Tone / Tint Tone : 8 / 8
11. **Heat Stability Centi.** : 350
12. **Average Particle Size, Micro Mtr.** : 3.8
13. **Mesh Residues (Sleeve 45 Micro Mtr.)** : 0.15 % Max.
14. **Water Soluble Salts** : 0.7% Max.
15. **Loss On Ignition (105°C)** : 1.0 Max.
16. **Free Sulphur** : 0.05% Max.
17. **Fastness To Acid (1-5 Scale, 5- Best)** : 3
18. **Fatsness To Alkali (1-5 Scale, 5- Best)** : 4
19. **CIE Lab. Coordinates Delta E Range** : 1.5 Max.
21. **Hazardous Ingredients** : None

**Notes** : This Technical Information Is Offered For Guidance But Without Guarantee.
Copper Phthalocyanine Crude Blue (CPC-Blue) - Technical Data >>

1. Information
Product : COPPER PHTHALOCYANINE CRUDE BLUE (CPC-BLUE)
Colour Index No : 74160

2. Physical Properties
Purity : 96% Minimum
Water Solubles : 1 % Maximum
Free Copper : 0.5% Maximum
Copper Content : 10.5% Minimum
pH : 7 ± 1
Volatile : 1 % Maximum

3. Fastness
Uses : Raw material for the manufacture of Pigment Blue 15, 15:1, 15:2, 5:3, 15:4
       Pigment Green – 7
       Reactive Turquoise Blue 3, 21, 25, 71, 140
       Direct Turquoise Blue 86
       Direct Blue 199
**TECHNICAL SPECIFICATION OF DIRECT YELLOW : 4**

- **PRODUCT:**
  - (a) NAME : Direct Brilliant Yellow
  - (b) COLOR INDEX NAME : Direct Yellow : 4
  - (c) CHEMICAL CLASS : Diazo
  - (c) COLOR INDEX NUMBER : 24890
  - (d) CAS NUMBER :
  - (e) HUE : Daylight : Brite Yellow

- **DYEING : CELLULOSE :**
  - (a) DYEING METHOD : Normal
  - (b) S.D.C.CLASSIFICATION : A
  - (c) EXHAUSTION : Good

- **OTHER FIBRES :**
  - (a) DYEING : Nylon ; with acetic acid
  - (b) STAINING : Silk and wool nylon dyed Acetate unstained.

- **FASTNESS PROPERTIES :**
  - (a) Method : AATCC
  - (b) Acid (organic) : 3
  - (c) Alkali : 1
  - (d) Hot Pressing : 2
  - (e) Light : 1/3 – 1/2 normal : --
  - normal : 5
  - 2 x normal : --
  - (f) Washing –alteration : 1
  - staining : --
  - (g) Water – alteration : 3
  - staining : --

- **OTHER PROPERTIES :**
  - (a) Dischargeability : very good

- (b) Effect of metals – Copper : unaffected
  - Iron : --

- **NOTES & NON-TEXTILE USAGE :**
  Heavy Metal Salts, Leather & Papar.
TECHNICAL SPECIFICATION OF DIRECT YELLOW : 6

- **PRODUCT** :
  (a) NAME : Direct Yellow 3GX
  (b) COLOR INDEX NAME : Direct Yellow : 6
  (c) CHEMICAL CLASS : Stilbene
  (d) CAS NUMBER : --
  (e) HUE : Daylight : Brite Yellow -- Reddish Yellow

- **DYEING : CELLULOSE** :
  (a) DYEING METHOD : Normal
  (b) S.D.C.CLASSIFICATION : B
  (c) EXHAUSTION : Good
  (d) Temp.of maximum affinity C : Good affinity cold
  (e) Leveling : --
  (f) Suitable after treatment : --

- **OTHER FIBRES** :
  (a) DYEING : --
  (b) STAINING : Silk and wool dyed lighter than cotton. Nylon stained Acetate unstained.

- **FASTNESS PROPERTIES** :
  (a) Method : AATCC ISO
  (b) Acid (organic) : 1 4-5
  (c) Alkali : 1 4-5
  (d) Hot Pressing : 4-5 4
  (e) Light : 1/3 – 1/2 normal : -- 2
      2 x normal : -- 3-4
  (f) Washing –alteration : (I)2-3 3
      staining : --- --
  (g) Water – alteration : 2-3 3
      staining : --- --

- **OTHER PROPERTIES** :
  (a) Discharge ability : Poor
  (b) Effect of metals – Copper : unaffected
      Iron : Duller

- **NOTES & NON-TEXTILE USAGE** :
  The Heavy Metal Salts are used as pigments for distempers, lithographic inks ,Oil colours and wall papers.
  Paper : Beater Dyeing and Coatings.
  Leather : See leather Dyes Section.
TECHNICAL SPECIFICATION OF DIRECT YELLOW : 12

- **PRODUCT**
  - (a) **NAME** : Direct Yellow
  - (b) **COLOR INDEX NAME** : Direct Yellow : 12
  - (c) **COLOR INDEX NUMBER** : 24895
  - (d) **CAS NUMBER** : 2870-32-8
  - (e) **HUE** : Daylight : Reddish Yellow

- **DYING : CELULOSE**
  - (a) **DYING METHOD** : Normal
  - (b) **S.D.C.CLASSIFICATION** : A
  - (c) **EXHAUSTION** : Good
  - (d) **TEMP. OF MAXIMUM AFFINITY** : 40

- **OTHER FIBRES**
  - (a) **DYING**
    - Wool : with Glauber's salt or acetic acid
    - Silk : Neutral or with acetic acid
    - Nylon : with acetic acid or ammonium tartrate
  - (b) **STAINING**
    - Silk and wool dyed as cotton. Acetate slightly stained, nylon dyed

- **PRINTING**
  - Nylon : with ammonium tartrate

- **FASTNESS PROPERTIES**
  - (a) **Method**
    - Acid (organic) : AATCC  2  ISO 3
    - Alkali :  2-3  4-5
    - Hot Pressing :  5  3-4
  - (b) **Light**
    - 1/3 – 1/2 normal : ---  3-4
    - normal : 4-5  4
    - 2 x normal : --  4
  - (c) **Washing**
    - Staining : (I) 1  1
    - Staining : --- --
  - (d) **Water**
    - Alteration : 1  1
    - Staining : ---- ---

- **OTHER PROPERTIES**
  - (a) **Dischargeability**
    - Cellulose : fair - good
    - Silk : good - very good
    - Nylon: (zinc formaldehyde - sulphoxylate) : Fair - fairly good
  - (b) **Effect of metals**
    - Copper : Practically unaffected
    - Iron : Practically unaffected
TECHNICAL SPECIFICATION OF DIRECT YELLOW : 39

- **PRODUCT:**
  (a) **NAME** : Direct Orange TGLL
  (b) **COLOR INDEX NAME** : Direct Yellow : 39
  (c) **CHEMICAL CLASS** : Stilbene
  (d) **COLOR INDEX NUMBER** : --
  (e) **CAS NUMBER** :
  (f) **HUE :** Daylight : Bright Yellow (Direct)

- **DYEING : CELLULOSE :**
  (a) **DYEING METHOD** : Normal
  (b) **S.D.C.CLASSIFICATION** : B
  (c) **EXHAUSTION** : Good
  (d) **Temp. of maximum affinity C** : 80 C
  (e) **Suitable Aftertreatment** : 4

- **OTHER FIBRES :**
  (a) **DYEING** : --
  (b) **STAINING** : Silk and wool lighter than cotton
    Acetate & Nylon unstained.

- **PRINTING:**
  (a) **Cellulose** : urea process with disodium orthophosphate.
    Concentrated brands preferable

- **FASTNESS PROPERTIES :**
  (a) **Method** : AATCC ISO ISO (4)
    Direct Direct
  (b) **Acid (organic)** : 3-4 4 5
  (c) **Alkali** : 2 4 5
  (d) **Hot Pressing** : 5 4 4
  (e) **Light : 1/3 – 1/2 normal** : -- 6 6
  (f) **Light : 2 x normal** : -- 7-8 7-8
  (g) **Washing – alteration** : --- (II)3 3-4 5
  (h) **Water – alteration** : 3-4 3-4 5

- **OTHER PROPERTIES :**
  (a) **Dischargeability** : Neutral and alkaline : fair
  (b) **Effect of metals – Copper** : unaffected
    **Iron** : unaffected

- **NOTES & NON-TEXTILE USAGE :**
  Hue somewhat duller on aftertretment Paper
  Leather : See Leather Dyes Section
TECHNICAL SPECIFICATION OF DIRECT YELLOW : 99

- **PRODUCT**:
  (a) **NAME** : Direct Sun Yellow RCH
  (b) **COLOR INDEX NAME** : Direct Yellow : 99
  (c) **CHEMICAL CLASS** : Diazo (stilbene)
  (d) **COLOR INDEX NUMBER** :
  (e) **HUE** : Daylight : Reddish Yellow

- **DYEING : CELLULOSE**:
  (a) **DYEING METHOD** : Normal
  (b) **S.D.C.CLASSIFICATION** : A
  (c) **EXHAUSTION** : Good
  (d) **TEMP.OFMAXIMUM AFFINITY** : 40 - 50

- **OTHER FIBRES**:
  (a) **DYEING** : Wool : with Glauber’s salt or acetic acid
                  Silk : Neutral or with acetic acid
                  Nylon : with acetic acid or formic acid.
  (b) **STAINING** : Silk and wool nylon dyed Acetate unstained.

- **PRINTING**:
  : cellulose : Direct (urea) & discharge print

**FASTNESS PROPERTIES**:
(a) **Method** : ISO
(b) **Acid (organic)** : 3
(c) **Alkali** : 4
(d) **Hot Pressing** : 4
(e) **Light : 1/3 – 1/2 normal** : 4
      normal : 4
      2 x normal : 4-5
(f) **Washing – alteration** : 1-2
    staining : ---
(g) **Water – alteration** : 1-2
    staining : ----

- **OTHER PROPERTIES**:
  (a) **Dischargeability** : Natural : good
    Alkaline : fair
  (b) **Effect of metals – Copper** : Practically unaffected
    Iron : Practically unaffected

- **NOTES & NON-TEXTILE USAGE**:
  Heavy Metal Salts, Leather & Papar.
## TECHNICAL SPECIFICATION FOR FLUORESCENT PIGMENTS

- **Decomposition point temperature**: 190°C to 200°C
- **Softening point**: 120°C to 130°C
- **Average particle size**
  - (a) 3 to 4 microns.
  - (b) No residue on 400 mesh I.S. Test sieve.
- **Bulk Density**: 0.55 to 0.65 gms/cc.
- **Free formaldehyde**: Below detectable limit.
- **Refractive Index**: 1.6
- **Specific Gravity**: 1.3 to 1.4
- **Dispersibility**: Due to micro fine particle size, our Fluorescent Pigments can be easily dispersed with high speed dispersion equipment.
- **Oil Absorption**: 50 to 60 gms. Of oil per 100 gms. Of Pigments.

### FOR INKS:

1. Heavy impact grinding methods like triple roll grinding, ball milling, sand milling, attritoring etc. must be avoided, as these methods tend to deteriorate the fluorescent and brightness.

2. Homogeneous dispersion in liquid medium can be very easily obtained by stirring with high-speed stirrer using right type of consistency & suitable emulsifiers. Due to very fine particle size of these pigments, they offer greater ease of dispersion. Here also heat generation during the process of stirring should be avoided. Solvent resistance mentioned below should be considered.
• **SOLVANT RESISTANCE (BLEEDING IN SOLVANTS):**

( RATING: 1 Considerable – 2 Partly or slight – 3 None)

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>3</td>
</tr>
<tr>
<td>Kerosene</td>
<td>3</td>
</tr>
<tr>
<td>White Spirit</td>
<td>3</td>
</tr>
<tr>
<td>Xylene</td>
<td>3</td>
</tr>
<tr>
<td>Tolune</td>
<td>3</td>
</tr>
<tr>
<td>D.O.P. (Di- Octyl- Phthalate)</td>
<td>3</td>
</tr>
<tr>
<td>N-hexane</td>
<td>3</td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>3</td>
</tr>
<tr>
<td>Naphtha</td>
<td>3</td>
</tr>
<tr>
<td>Methyl Cellosolve</td>
<td>1</td>
</tr>
<tr>
<td>Cellosolve</td>
<td>1</td>
</tr>
<tr>
<td>Methanol</td>
<td>2</td>
</tr>
<tr>
<td>I.P.A. (Iso-Propyl- Alchol:</td>
<td>2</td>
</tr>
<tr>
<td>N-Butanol</td>
<td>1</td>
</tr>
<tr>
<td>Acetone</td>
<td>1</td>
</tr>
<tr>
<td>MIBK (Methyl Iso Butyl Ketone)</td>
<td>2</td>
</tr>
<tr>
<td>Ethyl Acetate</td>
<td>2</td>
</tr>
<tr>
<td>AMYL Acetate</td>
<td>2</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>1</td>
</tr>
<tr>
<td>Dibutyl Phthalate</td>
<td>2-3</td>
</tr>
<tr>
<td>Isophorona</td>
<td>1</td>
</tr>
</tbody>
</table>

• **FOR PLASTICS:**

Our fluorescent Pigments of 5000 series are recommended for use in plastic manufacture. They are easy for use in low melting plastics up to 140° C to 150° C. They can be used for higher melting plastics like polypropylene in the range of 180° C to 200° C, employing the shortest possible time of heat exposure & suitable catalysts. For normal mould plastics the homogeneity is very nice. Incase of use by extrusion method. It is always advisable to disperse the pigments uniformly with granules. Use of suitable Plasticizers may help the uniform dispersion in plastic resins.

• **FOR PAPER COATING:**

Recently the trends of using fluorescent-coated papers have been increasing very rapidly in advertising and packing industries. We have developed specially these 6000 & 8000 series of pigments for paper coating. These are brighter micro fine pigments, which give better coverage.

- **APPLICATIONS:** Printing ink, Oil ink, Plastics, Rubber, Idols, Textile, Paper etc.
- **HAZARDOUS INGREDIENTS:** None
- **NOTES:** The information given above is in good faith but without guarantee.

----- END -----
TECHNICAL SPECIFICATION OF C.P.C. GREEN-7

- **FORMULA**: 
  \[ C_{32}H_{3}N_{8}Cl_{13}Cu \text{ TO } C_{32}H_{N8}Cl_{15}Cu \]
  (The Chlorine content varies between about 13 & 15 atoms of chlorine per molecule)

- **TRADE NAME**: COPPER PHTHALOCYNINE GREEN-G

  Color Index Generic Name : Pigment Green-7
  Color Index Number : 74260
  CAS Number : 1328-58-6
  Chemical Family : Phthalocynine

- **CAS NUMBER**

<table>
<thead>
<tr>
<th>CAS NUMBER</th>
<th>CHEMICAL NAME</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1328-53-6</td>
<td>Crude Copper Phthalocynine</td>
<td>98 + 2%</td>
</tr>
<tr>
<td></td>
<td>Green pigment</td>
<td></td>
</tr>
<tr>
<td>7440-50-8</td>
<td>Copper</td>
<td>5.5% Max.</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Moisture (Water)</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

- **PHYSICAL DATA**:
  - Powder Appearance - Dark & Bright Green
  - Specific Gravity - 1.40 to 1.44
  - Bulk Density - 3.0 ltr./kg.
  - Solubility in water - Insoluble
  - Oil absorption - 32 gms., 100 gms. of pigment
  - Sieve residue (350 mesh) - 1% max.
  - Heat stability - 200 Centi.
  - Moisture Content - 1% max.
  - Water soluble - 1% max.
  - PH of aqueous extract - 7
  - Heavy metal - < 5 PPM
  - Free copper - < 100 PPM
  - Texture - Very soft
  - Tinting strength - Very high

- **FASTESS PROPERTIES**:
  (1-5 Scale, 1 Poor - 5 Excellent)

<table>
<thead>
<tr>
<th>Water</th>
<th>Butanol</th>
<th>Butul Acetate</th>
<th>Aceton</th>
<th>Xylene</th>
<th>Linseed oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

  | Ethanol        | Methyl ethyl |               |        |        |             |
  | 5              | 5           |               |        |        |             |

  | Mineral turp-  | Methyl ethyl | Linseed oil   |        |        |             |
  | -entine        | 5           | 5             |        |        |             |

  | Soap           |             |               |        |        |             |
  | 5              |             |               |        |        |             |

- **LIGHT FASTNESS**:
  (1 - 8 Scale, 1 Very low - 8 Outstanding)

  25% Shade : 8  10% Shade : 8  5% Shade : 8

- **APPLICATIONS**: Textiles, Paints, Printing inks, Plastics, Rubber, Soap, Cement Color etc.

- **NOTES**: This technical information is offered for guidance but without guarantee.
### Commodity Name: COPPER PHTHALOCYNINE GREEN-G

### C.I. Generic Name: Pigment Green: 7

### C.I. Number: 74260

### CAS Number: 1328-58-6

### Chemical Family: Phthalocynine

- Paraffin Wax Resistance: 5
- Alkali Resistance: 4
- Heat Resistance: 200
- Linseed Oil Resistance: 5
- Water Resistance: 5
- Acid Resistance: 5
- Light Resistance: 6

- Residue: 1% Max. (350 Mesh, Wet)
- Water Soluble Matter: 1% Max.
- Moisture: 1% Max.
- Oil Absorption: 32 gms./100 gms.
- Strength: 95-105

### Application:
- Solvent In
- Aqueous In
- Paint
- Stationery
- Textile Printing
- Rubber
- PVC
- PE
- PP
TECHNICAL SPECIFICATION OF ORANGE: 5

• **PRODUCT:**

(a) **NAME** : Dinitraniline Orange  
(b) **CHEMICAL CLASS** : Dinitraniline  
(c) **CHEMICAL TYPE** : Organic  
(d) **COLOR INDEX NAME** : Pigment Orange : 5  
(e) **COLOR INDEX NUMBER** : 12075  
(f) **CAS NUMBER** : 3468-63-1

• **PHYSICAL PROPERTIES:**

(a) **SPECIFIC GRAVITY (20’ C)** : 1.3  
(b) **OIL ABSORPTION** : 50 to 100 gms. Pigment Powder  
(c) **SIEVE RESIDUE (350 mesh)** : 1 % max.  
(d) **MOISTURE CONTENT** : 1 % max.  
(e) **WATER SOLUBLE** : 1 % max.  
(f) **PH OF EQUEOUS Soln** : 3.5 to 7

• **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
<td>Acetone</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>5</td>
<td>Butanol</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>5</td>
<td>Xylene</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Menaral Turpentine</td>
<td>4</td>
<td>Butyl Acetate</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Soap</td>
<td>4</td>
<td>ACID</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ALKALI</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• **LIGHT FASTNESS** : (1 – 8 Scale 1 Very Law – 8 Outstanding)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL TONE</td>
<td>6</td>
<td>TINTED</td>
</tr>
</tbody>
</table>

• **APPLICATIONS** : Textiles, Water base paints & PVC.

• **HAZARDOUS INGREDIENTS** : None

⚠ **NOTES:** This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF ORANGE: 13

- **PRODUCT:**
  (a) NAME : Permanent Orange-G
  (b) CHEMICAL CLASS : Dia Azo Pigment Pyrazolon Orange
  (c) CHEMICAL TYPE : Organic
  (d) COLOR INDEX NAME : Pigment Orange : 13
  (e) COLOR INDEX NUMBER : 21110
  (f) CAS NO. : 3520-72-7

- **PHYSICAL PROPERTIES:**
  (a) SPECIFIC GRAVITY (20° C) : 1.5
  (b) OIL ABSORPTION : 37 cc.
  (c) SIEVE RESIDUE (350 mesh) : 1 % max.
  (d) MOISTURE CONTENT : 1 % max.
  (e) WATER SOLUBLE : 1 % max.
  (f) PH OF EQUEOUS Soln : 7

- **HEAT RESISTANCE:**
  (a) 120 Centi. for 30 minutes : Stable
  (b) 150 Centi. for 20 minutes : Stable
  (c) 180 Centi. for 10 minutes : Tends to dark

- **FASTNESS PROPERTIES** : (1-5 Scale: 1 Poor - 5 Excellent)
  Water : 5  Acetone : 4-5
  Linseed Oil : 5  Ethanol : 4-5
  Butanol : 5  Methyl Ethyl Ketone : 3
  Xylene : 3  Menaral Turpentine : 5
  Butyl Acetate : 4-5  5% Soap Soln : 4-5

- **LIGHT FASTNESS** : (1-8 Scale: 1 Very low - 8 Outstanding)
  25% Shade : 5  10% Shade : 4-5  5% Shade : 3

- **APPLICATIONS**:
  Textile, Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

- **HAZARDOUS INGREDIENTS** : None

- **NOTES** : This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF ORANGE : 34

• PRODUCT :

(a) NAME : Pigment Orange-GR
(b) CHEMICAL CLASS : Dia Azo Pigment Tolyl Parazone Rage
(c) CHEMICAL TYPE : Organic
(d) COLOR INDEX NAME : Pigment Orange : 34
(e) COLOR INDEX NUMBER : 21115
(f) CAS NUMBER : 15793-73-4

• PHYSICAL PROPERTIES :

(a) SPECIFIC GRAVITY (20' C) : 1.3
(b) OIL ABSORPTION : 37 cc.
(c) SIEVE RESIDUE (350 mesh) : 1 % max.
(d) MOISTURE CONTENT : 1 % max.
(e) WATER SOLUBLE : 1 % max.
(f) PH OF EQUEOUS Soln : 7

• HEAT STABILITY : 200 Centi.

• FASTNESS PROPERTIES : ( 1- 5 Scale : 1 Poor - 5 Excellent)

Water : 5  Acetone : 4-5
Linseed Oil : 5  Ethanol : 5
Butanol : 4-5  Methyl Ethyl Ketone : 4
Xylene : 3-4  Menaral Turpentine : 4-5
Butyl Acetate : 4-5  5% Soap Soln : 5

• LIGHT FASTNESS : ( 1 - 8 Scale : 1 Very low - 8 Outstanding)

25% Shade : 6  10% Shade : 5  5% Shade : 4-5

• APPLICATIONS : Printing ink, Plastics & Rubber.

• HAZARDOUS INGREDIENTS : None

❖ NOTES: This technical information is offered for guidance but without guarantee.

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Email: info@alfaindustries.com/alfa200in@yahoo.comWebsite:alfaindustries.com
TECHNICAL SPECIFICATION OF RED : 2

• PRODUCT :
  (a) NAME : Pigment Red-2 (Napthol Red)
  (b) CHEMICAL TYPE : Organic
  (c) COLOR INDEX NAME : Pigment Red : 2
  (d) COLOR INDEX NUMBER : 12310
  (e) CAS NUMBER : 6041-94-7

• PHYSICAL PROPERTIES :
  (a) SPECIFIC GRAVITY (20' C) : 1.2
  (b) OIL ABSORPTION : 52 to 100 grams Pigment Powder.
  (c) HEAT STABILITY : 120 Centi. Maxi. for 5 minutes.
  (d) BULK DENSITY : 0.25 %
  (e) WATER SOLUBLE : 5
  (f) PH OF EQUEOUS Soln : 7

• HEAT STABILITY :
  : 120 Centi. maximum for 5 minutes.

• FASTNESS PROPERTIES : ( 1- 5 Scale : 1 Poor - 5 Excellent)
  Water : 5  5% Hydrochloric Acid : 5
  Linseed Oil : 4  Ethanol : 3
  N-Butanol : 1  Methyl Ethyl Ketone : 3
  Xylene : 1  Mineral Turpentine : 4
  Ethyl Acetate : 3  5% Caustic Soda : 4
  Celloslove : 1  Dioctyl Phthalate : 2

• LIGHT FASTNESS : (1-8 Scale; 1 Very low – 8 Outstanding)
  FULL TONE : 6  TINTE : 4

• RESISTANCE TO :  ACID : Excellent  Alkali : Good
• APPLICATIONS : Paints & Ink.
• HAZARDOUS INGREDIENTS : None
• NOTES :

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Email: info@alfaindustries.com/alfa200in@yahoo.com Website: alfaindustries.com
**PRODUCT:**

(a) NAME : Pigment Red-3  
(b) CHEMICAL TYPE : Organic  
(c) COLOR INDEX NAME : Pigment Red : 3  
(d) COLOR INDEX NUMBER : 12120  
(e) CHEMICAL CLASS : Mono Azo Pigment - If napthol as rangal without lack forming group.  
(f) CAS NO. : 2425-85-6

**PHYSICAL PROPERTIES :**

(a) SPECIFIC GRAVITY (20' C) : 1.5  
(b) OIL ABSORPTION : 48 to %58 CC.  
(C) STEVE RESIDUE (350 Mesh) : 0.5 % Maximum  
(d) MOISTURE CONTENT : 1% Maximum  
(e) WATER SOLUBLE : 1% Maximum  
(e) PH OF EQUEOUS Soln : 6.5 to 7.1

**HEAT RESISTANCE** : 140 Centi. maximum for 5 minutes.

**FASTNESS PROPERTIES** : (1-5 Scale : 1 Poor - 5 Excellent)

Water : 5  Linseed Oil : 4  
Toluene : 2  Xylene : 1  
Turpentine : 1  Kerosens : 1  
Ethyl Acetate : 2  Dioctyl Phthalate : 2

**LIGHT FASTNESS** : (1 - 8 Scale : 1 Poor - 5 Excellent)  
(a) INTERIOR : 7 Full tone & 4 Tint (1:20)  
(b) EXTERIOR : 7 Full tone & 4 Tint (1:20)

**CHEMICAL RESISTANCE** : (1 to 5 Scale : 1 Poor - 5 Excellent)

Weak Acid : 5  Weak Alkali : 5  Soap Soln : 3

**APPLICATIONS** : Printing ink, Paints, Leather, Chalks & Crayons etc.  
**HAZARDOUS INGREDIENTS** : None  
**NOTES :**

⚠ This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF RED: 4

• PRODUCT:
  A. NAME                      : Hansa Red R-D
  B. CHEMICAL CLASS           : Mono Azo B-Naphthol range pigment without lake forming groups
  C. CAS NO.                   : 2814-77-9
  D. COLOUR INDEX NAME     : Pigment Red 4
  E. COLOUR INDEX NUMBER:  12085.

• PHYSICAL PROPERTIES :
  A. SPECIFIC GRAVITY (20°C)  : 1.56
  B. MOISTURE CONTENT        : 1% Max.
  C. WATER SOLUBLE              : 1% Max.
  D. PH OF AQUOUS EXTRACT     : 7
  E. GRIT CONTENT               : Less than 500 PPM

• FASTNESS PROPERTIES: (1 – 5 Scale; 1 Poor – 5 Excellent)
  Water                 5         Acetone                3
  Ethanol               3         Butanol                3
  Methyl Ethyl Ketone    2         Butyl Acetate          3
  Toluene                2-3      M.T.O.                 2-3
  Soap                   3   Linseed Oil 4-5
  Acid                   5   Alkali          5

• APPLICATIONS: Paints, Printing Ink, Plastics Rubber, Soap & Cement Colour etc.

• HAZARDOUS INGREDIENTS : None

• NOTES :
  This technical information is offered for guidance but without guarantee.
TECHNICAL SPECIFICATION OF RED: 8

• **PRODUCT:**

(a) **NAME** : Pigment Red F4R  
(b) **CHEMICAL TYPE** : Organic  
(c) **COLOR INDEX NAME** : Pigment Red : 8  
(d) **COLOR INDEX NUMBER** : 12335  
(e) **CHEMICAL CLASS** : Mono Azo Pigment - If napthol as rangal without lack forming group.  
(f) **CAS NO.** : 6410-30-6

• **PHYSICAL PROPERTIES :**

(a) **SPECIFIC GRAVITY (20° C)** : 1.46  
(b) **OIL ABSORPTION** : 39 CC.  
(C) **STEEVE RESIDUE (350 Mesh)** : 1% Maximum  
(d) **MOISTURE CONTENT** : 1% Maximum  
(e) **WATER SOLUBLE** : 1% Maximum  
(f) **PH OF EQUEOUS Soln** : 7

• **HEAT RESISTANCE :**

(a) 120 Centi. for 30 minutes : Stable  
(b) 150 Centi. for 20 minutes : Tends to Darker  
(c) 180 Centi. for 10 minutes : Darker

• **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Rating</th>
<th>Substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
<td>Linseed Oil</td>
</tr>
<tr>
<td>Ethanol</td>
<td>3</td>
<td>Xylene</td>
</tr>
<tr>
<td>Butanol</td>
<td>3</td>
<td>Acetone</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>3</td>
<td>Methyl Ethyl Ketone</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>3</td>
<td>5% Soap Soln</td>
</tr>
</tbody>
</table>

• **LIGHT FASTNESS** : ( 1 - 8 Scale : 1 very low - 8 Outstanding)

25% Shade : 5  
10% Shade : 4  
5% Shade : 3

• **APPLICATIONS** : Printing ink, Paints, Plastics, Rubber, Soap & Cement Color.  
• **HAZARDOUS INGREDIENTS** : None

• **NOTES** : This technical information is offered for guidance but without guarantee.
PRODUCT:

(a) NAME : Pigment Bordeaux - B
(b) CHEMICAL TYPE : Organic
(c) COLOR INDEX NAME : Pigment Red : 12
(d) COLOR INDEX NUMBER : 12385
(e) CHEMICAL CLASS : Mono Azo Pigment.
(f) CAS NO. : 6410-32-8

PHYSICAL PROPERTIES:

(a) SPECIFIC GRAVITY (20' C) : 1.38
(b) OIL ABSORPTION : 54 CC.
(C) STEVE RESIDUE (350 Mesh) : 1% Maximum
(d) MOISTURE CONTENT : 1% Maximum
(e) WATER SOLUBLE : 1% Maximum
(e) PH OF EQUEOUS Soln : 7

HEAT STABILITY

: 160 Centi.

FASTNESS PROPERTIES : ( 1- 5 Scale : 1 Poor - 5 Excellent)

Water : 5 Linseed Oil : 5
Xylene : 3 Butanol : 3
Butyl Acetate : 3 Methyl Ethyl Ketone : 2
Mineral Turpentine : 5 5% Soap Soln : 2

LIGHT FASTNESS : ( 1 - 8 Scale : 1 very low - 8 Outstanding)

25% Shade : 6 10% Shade : 5

APPLICATIONS : Textile, PVC, Rubber, Cosmetic etc.

HAZARDOUS INGREDIENTS : None

NOTES :

This technical information is offered for guidance but without guarantee.
• **PRODUCT**:

  A. NAME : Pigment Red-23  
  B. CHEMICAL INDEX NUMBER : 12355  
  C. CHEMICAL CLASS : Mono Azo Pigment without lake forming groups  
  D. COLOUR INDEX NAME : Pigment Red-23  
  E. CAS NUMBER : 6471-49-4  

• **PHYSICAL PROPERTIES**:

  A. SPECIFIC GRAVITY (20'C) : 1.5  
  B. OIL ABSORPTION : 38 + 2 cc  
  C. SIEVE RESIDUE (200 MESH) : 1% Max  
  D. MOISTURE CONTENT : 1% Max.  
  E. WATER SOLUBLE : 1% Max.  
  F. ph of 2% Extract : 6.9 + 0.3  

• **HEAT STABILITY (IN POINT)**:

  A. 110 C FOR 30 minutes - Stable  
  B. 120 C FOR 20 minutes - Stable  
  C. 140 C FOR 10 minutes - Stable  

• **FASTNESS PROPERTIES** : (1-5 Scale; 1 poor – 5 Excellent)

<table>
<thead>
<tr>
<th>Property</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1-2</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1-2</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>1-2</td>
</tr>
<tr>
<td>D.O.P</td>
<td>1</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>1-2</td>
</tr>
<tr>
<td>Acid</td>
<td>5</td>
</tr>
<tr>
<td>Xylene</td>
<td>1-2</td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>5</td>
</tr>
</tbody>
</table>

• **LIGHT FASTNESS** : (1-8 Scale; 1 Very low – 8 Outstanding)

<table>
<thead>
<tr>
<th>Shade</th>
<th>Shade : 1:10 TiO₂</th>
<th>Shade : 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-6</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

• **APPLICATIONS** : Textiles, Paints, Printing Ink, Plastics Rubber, Soap & Cement Colour.

• **HAZARDOUS INGREDIENTS** : None

• **NOTES** : This technical information is offered for guidance but without guarantee.
A. NAME                       : Pigment Red
B. CHEMICAL INDEX NUMBER    : 12370
C. CHEMICAL TYPE             : Organic.
D. COLOUR INDEX NAME        : Pigment Red 112
E. CAS NUMBER                : 6535-46-2

• PHYSICAL PROPERTIES:
A. SPECIFIC GRAVITY (20°C)  : 1.41
B. OIL ABSORPTION             : 75 Gms/100 Gms
C. GRIT CONTENT               : Less than 500 PPM
D. MOISTURE CONTENT          : 1% Max.
E. WATER SOLUBLE              : 1% Max.
F. PH OF EQUEOUS SOIN        : 6.5 to 7
G. HEAT STABILITY             : 180 D.C. for 5 minutes

• FASTNESS PROPERTIES: (1 – 5 Scale; 1 Poor – 5 Excellent)
Water                    5       Butanol                   3-4
Ethanol                4       Acetone                    3-4
Butyl Acetate   3-4  Toluene                   2-3
Mineral Turpentine        4       Soap                       4
Methyl Ethylketone        3       Linseed Oil   4-5
Acid                       5         Alkali                    5

• LIGHT FASTNESS: (1 – 8 Scale; 1 Very Low – 8 Outstanding)
Full Tone : 5-6 Tinted : 5

APPLICATIONS: Paints, Printing Ink, Plastics Rubber, Soap & Cement Colour etc

• HAZARDOUS INGREDIENTS: None

• NOTES:

➤ This technical information is offered for guidance but without guarantee.

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PRODUCTS:

- **NAME**: Naphtol Carmine FBB
- **CHEMICAL CLASS**: Mono Azo Pig. of NAPTHOL
- **CHEMICAL TYPE**: Organic
- **COLOUR INDEX NAME**: Pigment Red 146
- **COLOUR INDEX NUMBER**: 12485
- **CAS NUMBER**: 5280-68-2

PHYSICAL PROPERTIES:

(a) **SPECIFIC GRAVITY (20º C)**: 1.42  
(b) **OIL ABSORPTION**: 65 (G/100 G)  
(c) **SIEVE RESIDUE (350 mesh)**: 500 ppm.  
(d) **MOISTURE CONTENT**: 1 % Max.  
(e) **WATER SOLUBLE**: 1 % Max.  
(f) **PH OF EQUEOUS Soln.**: 7

HEAT RESISTANCE:

(a) 120 ºC for 30 Minutes: Stable  
(b) 150 ºC for 20 Minutes: Stable  
(c) 180 ºC for 10 Minutes: Stable

FASTNESS PROPERTIES: (1-5 Scale: 1 Poor - 5 Excellent)

- Water: 5  
- Ethyl Alcohol: 5  
- Acid: 5  
- Xylene: 5  
- Butyl Alcohol: 5

- Linseed Oil: 5  
- Butanol: 3  
- Alkali: 5  
- Mineral Turpentine: 5  
- Methyl Ethyl Keton: 4

LIGHT FASTNESS: (1-8 Scale: 1 Very Low - 8 Outstanding)

- FULL TINTING: 7  
- FULL TINTING: 7

APPLICATIONS: Textile, Paint, Printing Inks, Plastics, Rubber, Soap, Cement Color etc.

HAZARDOUS INGREDIENTS: NONE

Notes: This technical information is offered for guidance but without guarantee.

TECHNICAL SPECIFICATION OF RED: 170

PRODUCT:

A. **NAME**: Pigment Red
B. CHEMICAL INDEX NUMBER : 12475
C. CHEMICAL CLASS : Mono Azo Pigment
D. COLOUR INDEX NAME : Pigment Red 170
E. CAS NUMBER : 2786-76-7

- PHYSICAL PROPERTIES :
  A. SPECIFIC GRAVITY (20°C) : 1.36
  B. OIL ABSORPTION : 65 Gms/100 Gms
  C. GRIT CONTENT : Less than 500 PPM
  D. MOISTURE CONTENT : 1% Max.
  E. WATER SOLUBLE : 1% Max.
  F. pH OF EQUEOUS SOIN : 6.5 to 7

- FASTNESS PROPERTIES : (1 – 5 Scale; 1 Poor – 5 Excellent)
  Water 5 Butanol 4
  Ethanol 4 Acetone 4
  Butyl Acetate 4 Toluene 4-5
  Mineral Turpentine 5 Soap 5
  Methyl Ethylketone 3 Linseed Oil 5
  Acid 5 Alkali 5

- LIGHT FASTNESS : (1 – 8 Scale; 1 Very Lo – 8 Outstanding)
  Full Tone : 5-6 Tinted : 5-6

- APPLICATIONS : Paints, Printing Ink, Plastics Rubber, Soap & Cement Colour etc.

- HAZARDOUS INGREDIENTS : None

- NOTES :
  This technical information is offered for guidance but without guarantee.
(a) NAME : Pigment Red 2B (Barium)
(b) CHEMICAL TYPE : Organic
(c) COLOR INDEX NAME : Pigment Red 48 : 1
(d) COLOR INDEX NUMBER : 15865 : 1
(e) CAS NUMBER : 7585-41-3

- **PHYSICAL PROPERTIES**:
  (a) SPECIFIC GRAVITY : 1.77
  (b) BULKING VOLUME (ml/100G) : 450
  (c) PH VALUE : 7.5
  (d) MOISTURE : 1.0%
  (e) OIL ABSORPTION (g/100g) : 40

- **FASTNESS TO LIGHT**: (1-8 SCALE 1 VERY LAW – 8 OUTSTANDING)
  Full Tinting : 5  Reduced Tinting : 4

- **HEAT RESISTANCE**:
  (a) Heat (220° C/20min.) : 5
  (b) Acid (2 % HCL) : 5
  (c) Alkali (2 % Naoh) : 3

- **FASTNESS PROPERTIES** : (1-5 SCALE 1 POOR – 5 EXCELLENT)
  Ethyl Alcohol : 4  Xylene : 5
  Mineral Spirit : 4  Linseed Oil : 4
  Butyl Alcohol : 4  M.E.K. : 3
  Ethyl Acetate : 4

- **Applications** : Yellowish shade and good fastness. Use in Oil and gravure ink, specially for PVC, PA/NA gravure inks.

Resources:
- ALFA INDUSTRIES
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  - Email: info@alfaindustries.com/alfa200in@yahoo.com Website: alfaindustries.com

**TECHNICAL SPECIFICATION OF RED 48: 2**

- **PRODUCT**:
  (a) NAME : Pigment Red 2B Toner (Red RC)
  (b) CHEMICAL TYPE : Organic
**PIGMENT PROPERTIES:**
1. **SPECIFIC GRAVITY:** 1.70
2. **OIL ABSORPTION:** 60 CC.
3. **pH OF AQUEOUS Extract:** 7

**HEAT RESISTANCE:**
4. 120 Centi. for 30 minutes: 5
5. 150 Centi. for 20 minutes: 4-5
6. 180 Centi. for 10 minutes: 4-5

**FASTNESS PROPERTIES:**
- Water: 4-5
- Linseed Oil: 4
- Xylene/Toluene: 3-4
- Butanol: 4
- Butyl Acetate: 3
- Methyl Ethyl Ketone: 3
- Cellosolve: 3
- Soap: 2
- White Spirit: 4
- Dibuty Phthalate: 3
- Wax: 4
- Alkali: 4
- Detergent non-Ionic: 5
- Detergent Ionic: 3-4
- Edible Oils & Fats: 4
- Lime: 4

**LIGHT FASTNESS:**
- Full Shade: 5-6
- Tint (1:10) Shade: 3-4

**APPLICATIONS:**
- Resistance to Lithographic Breakdown: Satisfactory
- Resistance to Steam Sterilisation: 4
- Flow: Good
- Transparency: Excellent

**HAZARDOUS INGREDIENTS:** None

**NOTES:** This technical information is offered for guidance but without guarantee.
• **PIGMENT PROPERTIES:**

(a) SPECIFIC GRAVITY : 1.61 to 1.90
(b) OIL ABSORPTION : 50 CC.
(c) pH OF AQUEOUS Extract : 7 to 7.5

• **HEAT RESISTANCE:**

(g) 120 Centi. for 30 minutes : 5
(h) 150 Centi. for 20 minutes : 4-5
(i) 180 Centi. for 10 minutes : 4-5

• **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)

    | Property                  | Rating |
    |----------------------------|--------|
    | Water                      | 4-5    |
    | Xylene/Toluene             | 3-4    |
    | Butyl Acetate              | 3      |
    | Cellosolve                 | 3      |
    | White Spirit               | 4      |
    | Wax                        | 4      |
    | Detergent non-Ionic        | 5      |
    | Edible Oils & Fats         | 5      |
    | Dibutyl Phthalate          | 3      |
    | Linseed Oil                | 4      |
    | Butanol                    | 4      |
    | Methyl Ethyl Ketone        | 3      |
    | Soap                       | 2      |
    | Dibutyl Phthalate          | 3      |
    | Alkali                     | 4      |
    | Detergent Ionic            | 3-4    |
    | Lime                       | 4      |

• **LIGHT FASTNESS** : ( 1 - 8 Scale : 1 very low - 8 Outstanding)

    | Description         | Rating |
    |---------------------|--------|
    | Full Shade          | 5-6    |
    | Tint (1:10) Shade   | 3-4    |

• **APPLICATIONS** : Liquid inks, Leather Cloth, PVC etc.

• **HAZARDOUS INGREDIENTS** : None

❖ **NOTES**: This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF RED 48: 4**

• **PRODUCT** :

(a) NAME : Pigment Red 2B (manganese)
(b) CHEMICAL TYPE : Organic
(c) COLOR INDEX NAME : Pigment Red 48 : 4
(d) COLOR INDEX NUMBER : 15865 : 4
(e) CAS NUMBER : 5280-66-0

• **PIGMENT PROPERTIES** :
(a) SPECIFIC GRAVITY : 1.70
(b) BULKING VOLUME (ml/100G) : 352
(c) PH VALUE : 7.5
(d) MOISTURE : 1.0%
(e) OIL ABSORPTION (ml/100g) : 60
(f) HEAT STABILITY (°C) : 160°

- FASTNESS PROPERTIES : (1-5 SCALE; 1 POOR – 5 EXCELLENT)
  Full Tinting : 6  Reduced Tinting : 5

- LIGHT FASTNESS : (1-8 SCALE; 1 VERY LOW – 8 OUTSTANDING)
  25% Shade : 3  10% Shade : 3  5% Shade : 2

- RESISTANCE TO:
  (j) Heat (180°C/20min.) : 4
  (k) Acid (2 % HCL) : 5
  (l) Alkali (2 % Naoh) : 3

- RESISTANCE TO SOLVENTS (1 TO 5)
  Ethyl Alcohol : 4  Xylene : 3
  Butyl Alcohol : 2-3  Linseed Oil : 5
  Ethyl Acetate : 3-4  Mineral Spirit : 4
  M.E.K. : 3-4  Acid : 2
  Alkall : 2

- APPLICATIONS : Azo Mn Lake Pigment, slightly yellowish shade with good Used in paint & coatings. Light fastness & color strength.

➤ NOTES: This technical information is offered for guidance but without guarantee.

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ALFA INDUSTRIES
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Email: info@alfaindustries.com/alfa200in@yahoo.com Website: alfaindustries.com

TECHNICAL SPECIFICATION OF RED 49: 2

- PRODUCT :
  (a) NAME : Pigment Suthol Red
  (b) CHEMICAL TYPE : Organic
  (c) COLOR INDEX NAME : Pigment Red 49: 2
  (d) COLOR INDEX NUMBER : 15630: 2
  (e) CHEMICAL CLASS : Monoazo (Strontium salt of Acid Dye)
  (f) CAS NO. : 1103-39-5

Pigment Properties
(a) SPECIFIC GRAVITY : 1.70  
(b) OIL ABSORPTION : 60 CC.  
(c) PH OF AQUEOUS Extract : 7  

- HEAT RESISTANCE :  
  (m) 120 Centi. for 30 minutes : 5  
  (n) 150 Centi. for 20 minutes : 4-5  
  (o) 180 Centi. for 10 minutes : 4-5  

- FASTNESS PROPERTIES : (1-5 Scale : 1 Poor - 5 Excellent)  
  Water : 4-5  
  Linseed Oil : 4  
  Xylene/Toluene : 3-4  
  Butanol : 4  
  Butyl Acetate : 3  
  Methyl Ethyl Ketone : 3  
  Cellosolve : 3  
  Soap : 2  
  White Spirit : 4  
  Dibutyl Phthalate : 3  
  Detergent non-Ionic : 5  
  Detergent Ionic : 3-4  
  Edible Oils & Fats : 5  
  Lime : 4  
  Wax : 4  
  Alkali : 4  
  Detergent non-lonic : 5  
  Detergent lonic : 3-4  
  Edible Oils & Fats : 5  
  Lime : 4  
  Dibutyl Phthalate : 3  

- LIGHT FASTNESS : (1-8 Scale : 1 very low - 8 Outstanding)  
  Full Shade : 5-6  
  Tint (1:10) Shade : 3-4  

- APPLICATIONS : (PRINTING INK)  
  Resistance to Lithographic Breakdown : Satisfactory  
  Resistance to Steam Sterilisation : 4  
  Flow : Good  
  Transparency : Excellent  

- OTHER APPLICATIONS : Liquid inks, Leather Cloth, PVC etc.  
- HAZARDOUS INGREDIENTS : None  

- NOTES : This technical information is offered for guidance but without guarantee.

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Email: info@alfaindustries.com/alfa200in@yahoo.com  
Website: alfaindustries.com

**TECHNICAL SPECIFICATION OF RED 53: 1**

- PRODUCT :  
  (a) NAME : Pigment Lack Red 'C'  
  (b) CHEMICAL TYPE : Organic  
  (c) COLOR INDEX NAME : Pigment Red 53 : 1  
  (d) COLOR INDEX NUMBER : 15585: 1  
  (e) CHEMICAL CLASS : Mono Azo Pigment Barim Salt.  
  (f) CAS NO. : 5160-02-1  

- PHYSICAL PROPERTIES :
(a) SPECIFIC GRAVITY (20' C) : 1.8
(b) OIL ABSORPTION : 37 CC.
(C) STEVE RESIDUE (350 Mesh) : 1% Maximum
(d) MOISTURE CONTENT : 1% Maximum
(e) WATER SOLUBLE : 3% Maximum
(e) pH OF EQUEOUS Soln : 7

• HEAT STABILITY :
  (a) 120 Centi. for 30 minutes : Stable
  (b) 150 Centi. for 20 minutes : Stable
  (c) 200 Centi. for 10 minutes : Stable

• FASTNESS PROPERTIES : ( 1- 5 Scale : 1 Poor - 5 Excellent)
  Water : 5        Linseed Oil : 4-5
  Xylene : 3       Ethanol : 3
  Butyl Acetate : 3     Methyl Ethyl Ketone : 3
  Mineral Turpentine : 3-4   5% Soap Soln : 1-2

• LIGHT FASTNESS : ( 1 - 8 Scale : 1 very low - 8 Outstanding)
  25% Shade : 3  10% Shade : 3  5% Shade : 2

• APPLICATIONS : Paints, Printing ink, Plastics, Rubber, Cement Color etc.

• HAZARDOUS INGREDIENTS : None

• NOTES : This technical information is offered for guidance but without guarantee.

TECHNICAL SPECIFICATION OF RED 57:1

• PRODUCT :
  (a) NAME : Pigment Rubine Toner
  (b) CHEMICAL TYPE : Organic
  (c) COLOR INDEX NAME : Pigment Red 57 : 1
  (d) COLOR INDEX NUMBER : 15850:1
  (e) CHEMICAL CLASS : Mono Azo Pigment Calcium Lack.
  (f) CAS NO. : 5281-04-9

• PHYSICAL PROPERTIES :
  (a) SPECIFIC GRAVITY (20' C) : 1.5
  (b) OIL ABSORPTION : 54 CC.
  (C) STEVE RESIDUE (350 Mesh) : 1% Maximum
(d) MOISTURE CONTENT : 1% Maximum
(e) WATER SOLUBLE : 4% Maximum
(e) pH OF EQUEOUS Soln : 7

- **HEAT STABILITY :**
  (a) 120 Centi. for 30 minutes : Stable
  (b) 140 Centi. for 20 minutes : Stable
  (c) 160 Centi. for 10 minutes : Darker

- **FASTNESS PROPERTIES :** (1-5 Scale : 1 Poor - 5 Excellent)
  Water : 5
  Linseed Oil : 4
  Xylene : 3
  Ethanol : 2-3
  Butyl Acetate : 3
  Methyl Ethyl Ketone : 2-3
  Mineral Turpentine : 4
  5% Soap Soln : 2
  Butanol : 2-3
  Acetone : 4

- **LIGHT FASTNESS :** (1-8 Scale : 1 very low - 8 Outstanding)
  25% Shade : 4-5
  10% Shade : 3-4
  5% Shade : 3

- **APPLICATIONS :** Paints, Printing ink, Plastics, Rubber, Cement Color etc.
- **HAZARDOUS INGREDIENTS :** None
- **NOTES :** This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF VIOLET – 23**

- **TYPE** : Dioxazine Pigment
- **INTERNATIONAL NAME** : Pigment Violet – 23
- **COLOUR INDEX NO.** : 51319
- **FORMULA** : C₁₄ H₂₂ Cl₂ N₄ O₂
- **CHEMICAL COMPOSITION** : 3-Amino-9Ethyl Carbazole Condensed With Chloranil.
- **MOLUCULAR WEIGHT** : 588
- **CAS NO.** : 6358-30-1
- **ODOUR** : Mild
- **OIL ABSORPTION** : 45% to 47%
- **SIEVE RESIDUE**: Less than 0.1%
- **BULK VOLUME**: 3.0 to 3.5 Ltr. / Kg.
- **PH**: 7.0 to 7.5
- **HEAT STABILITY °C**: Thermally Stable up to 160°C
- **MELTING POINT**: Unknown (Very High Melting Point)
- **SOLUBILITY**: Insoluble in Water and almost all organic Solvents
- **BLEEDING FASTNESS**: No bleeding in Acid, Alkali, Hydrocarbon, Solvents etc.
- **USE**: Use in Paint, Ink, Plastic, Rubber, Textile, Emulsion etc.
- **NOTES**: This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF PIGMENT YELLOW: 1**

(1) **PRODUCT**:

A. **NAME**: Pigment Yellow G  
B. **CHEMICAL INDEX NUMBER**: 11680  
C. **CHEMICAL CLASS**: Mono Azo Pigment without lake forming groups  
D. **COLOUR INDEX NAME**: Pigment Yellow 1  
E. **CAS NUMBER**: 2512-29-0

(2) **PHYSICAL PROPERTIES**:

G. **SPECIFIC GRAVITY (20°C)**: 1.486  
H. **OIL ABSORPTION**: 37 cc  
I. **SIEVE RESIDUE (350 MESH)**: 1% Max  
J. **HEAT STABILITY (IN PAINT)**: 140°C  
K. **MOISTURE CONTENT**: 1% Max.  
L. **WATER SOLUBLE**: 1% Max.  
M. **pH of 2% Extract**: 7
FASTNESS PROPERTIES: (1-5 Scale; 1 Poor – 5 Excellent)

<table>
<thead>
<tr>
<th>Liquid</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Butanol</td>
<td>3</td>
</tr>
<tr>
<td>Ethanol</td>
<td>3</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>2-3</td>
</tr>
<tr>
<td>Xylene</td>
<td>4-5</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>3-4</td>
</tr>
<tr>
<td>Soap</td>
<td>3-4</td>
</tr>
<tr>
<td>Methyl Ethylketone</td>
<td>2-3</td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>4-5</td>
</tr>
</tbody>
</table>

LIGHT FASTNESS: (1-8 Scale; 1 very low – 8 Outstanding)

- 25% Shade: 6-7
- 10% Shade: 5-6
- 5% Shade: 5

DISPERSION TECHNIQUES: Following equipment can be used for pre-mixing and grinding operations: Ball & Pebble Mills, High Speed Disc Impellers, Three Roll Mills, Heavy Duty Mixers.

APPLICATIONS: Pigments is Suitable for the following Ink Systems: Letter Press Inks, Offset Inks, Flexo Inks, Silk Screen Inks etc.

HAZARDOUS INGREDIENTS: None

NOTES: This technical information is offered for guidance but without guarantee.
(f) PH OF EQUEOUS Soln : 7

- **HEAT RESISTANCE**:
  - (a) 120 Centi. for 30 minutes : Stable
  - (b) 140 Centi. for 20 minutes : Stable
  - (c) 180 Centi. for 10 minutes : Tends to dark

- **FASTNESS PROPERTIES** : (1-5 Scale : 1 Poor - 5 Excellent)
  - Water : 5
  - Acetone : 3
  - Linseed Oil : 4-5
  - Ethanol : 2-3
  - Butanol : 2-3
  - Methyl Ethyl Ketone : 2
  - Xylene : 2
  - Menaral Turpentine : 3
  - Butyl Acetate : 3
  - 5% Soap Soln : 4

- **LIGHT FASTNESS** : (1 - 8 Scale : 1 Very low - 8 Outstanding)
  - 25% Shade : 7
  - 10% Shade : 7
  - 5% Shade : 6-7

- **APPLICATIONS** : Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

- **HAZARDOUS INGREDIENTS** : None

- **NOTES** : This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF YELLOW: 12**

- **PRODUCT** :
  - (a) NAME : Pigment Yellow G
  - (b) CHEMICAL CLASS : Dia Azo Pigment without lake forming group
  - (c) CHEMICAL TYPE : Organic
  - (d) COLOR INDEX NAME : Pigment Yellow : 12
  - (e) COLOR INDEX NUMBER : 21090
  - (f) CAS NUMBER : 6358-85-6

- **PHYSICAL PROPERTIES** :
  - (a) SPECIFIC GRAVITY (20' C) : 1.4
  - (b) OIL ABSORPTION : 43 cc.
  - (c) SIEVE RESIDUE (350 mesh) : 1 % max.
  - (d) MOISTURE CONTENT : 1 % max.
  - (e) WATER SOLUBLE : 1 % max.
  - (f) PH OF EQUEOUS Soln : 7
**HEAT RESISTANCE :**

(a) 120 Centi. for 30 minutes : Stable
(b) 150 Centi. for 20 minutes : Stable
(c) 180 Centi. for 10 minutes : Darker

**FASTNESS PROPERTIES :** (1-5 Scale : 1 Poor - 5 Excellent)

- Water : 5
- Acetone : 4
- Linseed Oil : 5
- Ethanol : 5
- Butanol : 5
- Methyl Ethyl Ketone : 5
- Xylene : 3
- Menaral Turpentine : 5
- Butyl Acetate : 4
- 5% Soap Soln : 5

**LIGHT FASTNESS :** (1-8 Scale : 1 Very low - 8 Outstanding)

- 25% Shade : 4
- 10% Shade : 4
- 5% Shade : 3

**APPLICATIONS :** Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

**HAZARDOUS INGREDIENTS :** None

**NOTES :** This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF YELLOW: 13**

**PRODUCT :**

(a) NAME : Pigment Yellow GRX
(b) CHEMICAL CLASS : Dia Azo Pigment
(c) CHEMICAL TYPE : Organic
(d) COLOR INDEX NAME : Pigment Yellow : 13
(e) COLOR INDEX NUMBER : 21100
(f) CAS NUMBER : 5102-83-0
(g) FORMULA : C_{36}H_{34}Cl_{2}N_{6}O_{4}

**PHYSICAL PROPERTIES :**

(a) SPECIFIC GRAVITY (20° C) : 1.3
(b) OIL ABSORPTION : 37 cc.
(c) SIEVE RESIDUE (350 mesh) : 1 % max.
(d) MOISTURE CONTENT : 1 % max.
(e) WATER SOLUBLE : 1 % max.
(f) PH OF EQUEOUS Soln : 7

**HEAT RESISTANCE :**

(a) 120 Centi. for 30 minutes : Stable
(b) 150 Centi. for 20 minutes : Stable
(c) 180 Centi. for 10 minutes : Darker
**FASTNESS PROPERTIES**: (1-5 Scale: 1 Poor - 5 Excellent)

- Water: 5
- Linseed Oil: 5
- Butanol: 5
- Xylene: 5
- Butyl Acetate: 5
- Acetone: 4-5
- Ethanol: 5
- Methyl Ethyl Ketone: 4
- Menaral Turpentine: 5
- 5% Soap Soln: 5

**LIGHT FASTNESS**: (1-8 Scale: 1 Very low - 8 Outstanding)

- 25% Shade: 5-6
- 10% Shade: 5
- 5% Shade: 4

**APPLICATIONS**: Paint, Printing ink, Plastics, Rubber, Soap, Cement Color & Cable compound.

**HAZARDOUS INGREDIENTS**: None

**NOTES**: This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF YELLOW: 14**

**PRODUCT**:

- (a) **NAME**: Pigment Yellow GGA
- (b) **CHEMICAL CLASS**: Dia Azo Pigment
- (c) **CHEMICAL TYPE**: Organic
- (d) **COLOR INDEX NAME**: Pigment Yellow: 14
- (e) **COLOR INDEX NUMBER**: 21095
- (f) **CAS NUMBER**: 5102-83-0

**PHYSICAL PROPERTIES**:

- (a) **SPECIFIC GRAVITY (20' C)**: 1.4
- (b) **OIL ABSORPTION**: 43 cc.
- (c) **SIEVE RESIDUE (350 mesh)**: 1 % max.
- (d) **MOISTURE CONTENT**: 1 % max.
- (e) **WATER SOLUBLE**: 1 % max.
- (f) **PH OF EQUEOUS Soln**: 7

**HEAT RESISTANCE**:
(a) 120 Centi. for 30 minutes : Stable
(b) 150 Centi. for 20 minutes : Stable
(c) 200 Centi. for 10 minutes : Stable

• **FASTNESS PROPERTIES** : ( 1- 5 Scale : 1 Poor - 5 Excellent)
  
<table>
<thead>
<tr>
<th>Substance</th>
<th>FASTNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>5</td>
</tr>
<tr>
<td>Butanol</td>
<td>5</td>
</tr>
<tr>
<td>Xylene</td>
<td>3</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>4-5</td>
</tr>
<tr>
<td>Acetone</td>
<td>4-5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>4-5</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>3</td>
</tr>
<tr>
<td>Menaral Turpentine</td>
<td>5</td>
</tr>
<tr>
<td>5% Soap Soln</td>
<td>4-5</td>
</tr>
</tbody>
</table>

• **LIGHT FASTNESS** : ( 1 - 8 Scale : 1 Very low - 8 Outstanding)
  
<table>
<thead>
<tr>
<th>Shade</th>
<th>FASTNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Shade</td>
<td>5</td>
</tr>
<tr>
<td>10% Shade</td>
<td>4-5</td>
</tr>
<tr>
<td>5% Shade</td>
<td>3</td>
</tr>
</tbody>
</table>

• **APPLICATIONS** : Paint, Printing ink, Plastics, Rubber, Soap, Cement Color etc.

• **HAZARDOUS INGREDIENTS** : None

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**NOTES** : This technical information is offered for guidance but without guarantee.

**Commodity Name** : Permanent Yellow 2GS

**C.I. Generic Name** : Pigment Yellow: 14

**C.I. Number** : 21095

**CAS Number** : 5468-75-7

**Chemical Family** : Disazo

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- Paraffin Wax Resistance : 5
- Alkali Resistance : 4
- Heat Resistance : 200
- Linseed Oil Resistance : 5
- Water Resistance : 5
- Acid Resistance : 5
- Light Resistance : 6

- Residue : 300 PPM (325 Mesh, Wet)
- Water Soluble Matter : 1.5
- Moisture : 2
- Oil Absorption : 45-55
• Strength : 95-105

• Application :
  ✓ Solvent In
  ✓ Aqueous In
  □ Paint
  ✓ Stationery
  ✓ Textile Printing
  □ Rubber
  ✓ PVC
  ✓ PE
  ✓ PP
• **FASTNESS PROPERTIES** : (1-5 Scale; 1 poor – 5 Excellent)

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Value</th>
<th>Solvent</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
<td>N-Butanol</td>
<td>4</td>
</tr>
<tr>
<td>Ethanol</td>
<td>5</td>
<td>Alkali</td>
<td>5</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>4</td>
<td>D.O.P.</td>
<td>5</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>4</td>
<td>Acid</td>
<td>5</td>
</tr>
<tr>
<td>Xylene</td>
<td>3</td>
<td>Linseed Oil</td>
<td>5</td>
</tr>
</tbody>
</table>

• **LIGHT FASTNESS** : (1-8 Scale; 1 very low – 8 outstanding)

Shade : 5-6 Shade : 1:10 TiO₂ Shade : 3

• **APPLICATIONS** : Textiles Paints, Printing Ink, Plastics Rubber, Soap & Cement Colour.

⚠️ **NOTES**: This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF YELLOW: 62**

**PRODUCT** :
(a) NAME : Pigment Yellow WSR
(b) CHEMICAL CLASS : Mono Azo Salt (Ca)
(c) CHEMICAL TYPE : Organic
(d) COLOR INDEX NAME : Pigment Yellow : 62
(e) COLOR INDEX NUMBER : 13940
(f) CAS NUMBER : 12286-66-7

**PHYSICAL PROPERTIES** :
(a) Bulk density : 0.2 Kg.
(b) Bulk Volume : 4.92/Kg.
(c) DOP-absorption : 60.0 g/100g
(d) Oil absorption : 59.8g/100g
(e) Specific Gravity : 1.62g/cm3
(f) Specific surface : 22.4m2/g

**SOLVENT RESISTANCE DATA**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Value</th>
<th>Solvent</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>3-4</td>
<td>Butylacetate</td>
<td>3-4</td>
</tr>
<tr>
<td>Butanol</td>
<td>4</td>
<td>Dimethylacetamide</td>
<td>2</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>3-4</td>
<td>Dioctyladipate</td>
<td>3</td>
</tr>
<tr>
<td>Dibutyl Phthalate</td>
<td>3</td>
<td>Dioctylphthalate</td>
<td>3-4</td>
</tr>
<tr>
<td>Diethyleneglycol</td>
<td>2-3</td>
<td>Ethanol</td>
<td>3-4</td>
</tr>
</tbody>
</table>
Dimehylacetamide : 2  Ethylacetate : 3-4  
Dimehylacetamide/Water 1:1 : 3  Ethylglycol : 3  
Dimehylacetamide/Water1:1,45 :2-3  MethylethylKetone : 3  
Dimehylacetamide/Water 2:1 : 2-3  Methylisobutylketone : 3-4  
Dimehylacetamide/Water2:1,45 : 2  Naphtha,painter’snap : 4  
Dimehylacetamide/Water 3:1 : 2-3  Toluene : 3  
Dimehylacetamide/Water 3:1,45 : 2  Trichloroethyience : 3  
Dimethlformamide : 2  Water : 4-5  
Dimethlformamide, 45.C : 2  Water, 45 .C : 4  
Dimethlformamide/MEK : 2-3  White Spirit(boil80/110) : 4-5  
Dimethlformamide/Water 1:3 : 3-4  Xylene : 3  
Dimethlformamide/Water 1:3,45 : 3  
Ethylacetate/Toluene/Butanol : 3

• APPLICATIONS : Fibres, paints & plastics.
• HAZARDOUS INGREDIENTS : None
• NOTES : This technical information is offered for guidance but without guarantee.

TECHNICAL SPECIFICATION OF Yellow -74

• PRODUCT :
A. NAME : Pigment Yellow 74  
B. CHEMICAL INDEX NUMBER : 11741  
C. CHEMICAL CLASS : Mono Azo Pigment without lake forming groups  
D. COLOUR INDEX NAME : Pigment Yellow 74  
E. CAS NUMBER : 5102-83-0  

• PHYSICAL PROPERTIES :
T. SPECIFIC GRAVITY (20'C) : 1.486  
U. OIL ABSORPTION : 37 cc  
V. SIEVE RESIDUE (240 MESH) : 0.5% Max  
W. MOISTURE CONTENT : 1% Max.  
X. WATER SOLUBLE : 1% Max.  
Y. ph of 2% Extract : 7  

• HEAT STABILITY (IN POINT) :
G. 120 C FOR 30 minuts - Stable  
H. 200 C FOR 10 minuts - Stable  
I. 150 C FOR 20 minuts - Stable  

• FASTNESS PROPERTIES : (1-5 Scale; 1 Poor – Excellent)  
Water 5  Butanol 3
**LIGHT FASTNESS**: ((1-8 Scale; 1 Very Low – 8 Outstanding)

1/1 Depth : 6 (8.3 %)  
1/3 Depth : 5(4.2 %)  
1/25 Depth : 4 (0.8 %)

**APPLICATIONS**: Letter Press Inks, Offset Inks, Flexo Inks, Silk Screen Inks etc.

**HAZARDOUS INGREDIENTS**: None

**NOTES**: This technical information is offered for guidance but without guarantee.

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**TECHNICAL SPECIFICATION OF YELLOW : 83**

**PRODUCT :-**

A. **NAME** : DIARYLIDE YELLOW - HR  
B. **COLOUR INDEX NAME** : Diarylide Yellow - 83  
C. **COLOUR INDEX NUMBER**: 21108  
D. **CHEMICAL CLASS** : Diarylide Pigment  
E. **CAS NO.** : 5567-15-7

**PHYSICAL DATA :-**

A. **SPECIFIC GRAVITY** : 1.27 - 1.50  
B. **OIL ABSORPTION** : 39 to 98  
C. **SIEVE RESIDUE (350 MESH)** : 1% Max.  
D. **MOISTURE CONTENT** : 1% Max.  
E. **WATER SOLUBLE** : 1% Max.  
F. **PH OF EQUEOUS EXTRACT** : 4.4 - 7.0  
G. **BULK DENSITY** : 0.41 g/cc

**FASTNESS PROPERTIES**: ((1-5 Scale; 1 Poor – Excellent)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Linseed Oil</td>
<td>5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>4</td>
</tr>
<tr>
<td>Ethyl Acetate</td>
<td>3 - 4</td>
</tr>
<tr>
<td>Xylene</td>
<td>3 - 4</td>
</tr>
<tr>
<td>Alkali</td>
<td>Very good</td>
</tr>
<tr>
<td>Acid</td>
<td>Very good</td>
</tr>
<tr>
<td>Di Octyl Phthalate</td>
<td>4</td>
</tr>
<tr>
<td>Cellosive</td>
<td>2</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>4 - 5</td>
</tr>
</tbody>
</table>
- **LIGHT FASTNESS**: (1-8 Scale; 1 Very Low – 8 Outstanding)
  - Full Tone -> 7 - 8
  - Tinted -> 5

- **APPLICATIONS**: Textiles, Paints, Printing Ink, Plastics, Rubber, Soap etc.

- **HAZARDOUS INGREDIENTS**: None

- **NOTES**: This technical information is offered for guidance but without guarantee.

## TECHNICAL SPECIFICATION OF Yellow -127

### (1) PRODUCT:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. NAME</td>
<td>Pigment Yellow ARL</td>
</tr>
<tr>
<td>B. CHEMICAL INDEX NUMBER</td>
<td>21102</td>
</tr>
<tr>
<td>C. CHEMICAL CLASS</td>
<td>Mono Azo Pigment without lake forming groups</td>
</tr>
<tr>
<td>D. COLOUR INDEX NAME</td>
<td>Pigment Yellow 127</td>
</tr>
<tr>
<td>E. CAS NUMBER</td>
<td>71872-67-8</td>
</tr>
</tbody>
</table>

### (2) PHYSICAL PROPERTIES:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z. SPECIFIC GRAVITY (20°C)</td>
<td>1.38</td>
</tr>
<tr>
<td>AA. OIL ABSORPTION</td>
<td>40 cc</td>
</tr>
<tr>
<td>BB. SIEVE RESIDUE (350 MESH)</td>
<td>5% Max</td>
</tr>
<tr>
<td>CC. HEAT STABILITY (IN PAINT)</td>
<td>200 C</td>
</tr>
<tr>
<td>DD. MOISTURE CONTENT</td>
<td>1% Max</td>
</tr>
<tr>
<td>EE. WATER SOLUBLE</td>
<td>1% Max</td>
</tr>
<tr>
<td>FF. pH of 2% Extract</td>
<td>7</td>
</tr>
</tbody>
</table>

### (3) FASTNESS PROPERTIES:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>5</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>5</td>
</tr>
<tr>
<td>Mineral Turpentine</td>
<td>5</td>
</tr>
<tr>
<td>Methyl Ethylketone</td>
<td>4</td>
</tr>
</tbody>
</table>

### (4) LIGHT FASTNESS:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Shade</td>
<td>6-7</td>
</tr>
<tr>
<td>10% Shade</td>
<td>5-6</td>
</tr>
<tr>
<td>5% Shade</td>
<td>5</td>
</tr>
</tbody>
</table>
(5) **DISPERSION TECHNIQUES** :

Following equipment can be used for pre-mixing and grinding operations:
- Ball & Pebble Mills
- High Speed Disc Impellers
- Three Roll Mills
- Heavy Duty Mixers

(6) **APPLICATIONS** :

Pigments is Suitable for the following Ink Systems:
- Letter Press Inks, Offset Inks, Flexo Inks, Silk Screen Inks etc.
Special Remarks: Suitable for Process Yellow & conforming to suitable for heat set inks.

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**TECHNICAL SPECIFICATION OF YELLOW 42**

- **Detail of 51274-00-1**
- **Name:** Pigment Yellow 42
- **CAS Number:** 51274-00-1
- **Molecular Structure:** Fe₂O₃. H₂O
- **Molecular Weight:** 177.71
- **EINECS:** 257-098-5
- **Density:** 5.24
- **Melting Point:** 1538 °C
- **Flash Point:** >230 °F
- **Risk Codes:** 36/37/38

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**AUTHORISED SIGNATURE**

FOR ALFA INDUSTRIES
• **FORMULA**: \( C_{32}H_{32}N_8Cl_{13}Cu \text{ TO } C_{32}H_{32}N_8Cl_{15}Cu \)
  (The Chlorine content varies between about 13 & 15 atoms of chlorine per molecule)

• **TRADE NAME**: COPPER PHTHALOCYanine GREEN-G

  Color Index Generic Name : Pigment Green-7
  Color Index Number : 74260
  CAS Number : 1328-58-6
  Chemical Family : Phthalocynine

• **CAS NUMBER  CHEMICAL NAME  % BY WEIGHT**

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1328-53-6</td>
<td>Crude Copper Phthalocynine Green pigment</td>
<td>98 + 2%</td>
</tr>
<tr>
<td>7440-50-8</td>
<td>Copper</td>
<td>5.5% Max.</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Moisture (Water)</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

• **PHYSICAL DATA** :-

  - Powder Appearance  - Dark & Bright Green
  - Specific Gravity   - 1.40 to 1.44
  - Bulk Density       - 3.0 ltr./kg.
  - Solubility in water - Insoluble
  - Oil absorption     - 32 gms., 100 gms. of pigment
  - Sieve residue (350 mesh) - 1% max.
  - Heat stability     - 200 Centi.
  - Moisture Content   - 1% max.
  - Water soluble      - 1% max.
  - PH of aqueous extract - 7
  - Heavy metal        - < 5 PPM
  - Free copper        - < 100 PPM
  - Texture            - Very soft
  - Texture            - Very high

• **FASTESS PROPERTIES**: (1-5 Scale, 1 Poor - 5 Excellent)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>Butanol</td>
<td>5</td>
</tr>
<tr>
<td>Butyl Acetate</td>
<td>5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>5</td>
</tr>
<tr>
<td>Aceton</td>
<td>5</td>
</tr>
<tr>
<td>Xylene</td>
<td>5</td>
</tr>
<tr>
<td>Mineral turpentine</td>
<td>5</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>5</td>
</tr>
<tr>
<td>Linseed oil</td>
<td>5</td>
</tr>
</tbody>
</table>
• **LIGHT FASTNESS**: (1 - 8 Scale, 1 Very low - 8 Outstanding)
  
  25% Shade : 8  
  10% Shade: 8  
  5% Shade: 8

• **APPLICATIONS**: Textiles, Paints, Printing inks, Plastics, Rubber, Soap, Cement Color etc.

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**NOTES**: This technical information is offered for guidance but without guarantee.

**Commodity Name**: COPPER PHthalocynine GREEN-G

**C.I. Generic Name**: Pigment Green: 7

**C.I. Number**: 74260

**CAS Number**: 1328-58-6

**Chemical Family**: Phthalocynine

- Paraffin Wax Resistance : 5
- Alkali Resistance : 4
- Heat Resistance : 200
- Linseed Oil Resistance : 5
- Water Resistance : 5
- Acid Resistance : 5
- Light Resistance : 6

- Residue : 1% Max. (350 Mesh, Wet)
- Water Soluble Matter : 1% Max.
- Moisture : 1% Max.
- Oil Absorption : 32 gms./100 gms.
- Strength : 95-105

- Application :  
  ✓ Solvent In
  ✓ Aqueous In
  ✓ Paint
  ✓ Stationery
  ✓ Textile Printing
  ✓ Rubber
  ✓ PVC
  ✓ PE
  ✓ PP
TECHNICAL SPECIFICATION OF RED 53: 1

- **PRODUCT:**
  
  (a) **NAME** : Pigment Lack Red 'C'
  (b) **CHEMICAL TYPE** : Organic
  (c) **COLOR INDEX NAME** : Pigment Red 53 : 1
  (d) **COLOR INDEX NUMBER** : 15585: 1
  (e) **CHEMICAL CLASS** : Mono Azo Pigment Barim Salt.
  (f) **CAS NO.** : 5160-02-1

- **PHYSICAL PROPERTIES :**
  
  (a) **SPECIFIC GRAVITY (20° C)** : 1.8
  (b) **OIL ABSORPTION** : 37 CC.
  (C) **STEVE RESIDUE (350 Mesh)** : 1% Maximum
  (d) **MOISTURE CONTENT** : 1% Maximum
  (e) **WATER SOLUBLE** : 3% Maximum
  (e) **pH OF EQUEOUS Soln** : 7

- **HEAT STABILITY :**
  
  (a) 120 Centi. for 30 minutes : Stable
  (b) 150 Centi. for 20 minutes : Stable
  (c) 200 Centi. for 10 minutes : Stable

- **FASTNESS PROPERTIES :** *(1-5 Scale : 1 Poor - 5 Excellent)*
  
  Water : 5  Linseed Oil : 4-5
  Xylene : 3  Ethanol : 3
  Butyl Acetate : 3  Methyl Ethyl Ketone : 3
  Mineral Turpentine : 3-4  5% Soap Soln : 1-2

- **LIGHT FASTNESS :** *(1-8 Scale : 1 very low - 8 Outstanding)*
  
  25% Shade : 3  10% Shade : 3  5% Shade : 2

- **APPLICATIONS** : Paints, Printing ink, Plastics, Rubber, Cement Color etc.
• **HAZARDOUS INGREDIENTS**: None

 Nullable **NOTES**: This technical information is offered for guidance but without guarantee.