

DDI

ACID DYES FOR NYLON/SILK/WOOL

DDI

DOLPHIN BRAND

DOLPHIN

DYE STUFF INDUSTRIES

(Mfg & Exporter of Dyestuff & Chemicals)

MUMBAI (INDIA)

ACID DYES

Introduction :

Acid dyes are water soluble anionic dyes. That are applied to nitrogenous fibres such as wool, silk, nylon and modified acrylic fibres from acid or neutral baths. Acid dye contain, as the active principle aromatic compounds including in their chemical structure a chromophonic group and a water solubilizing group. Acid dyes are not substantive to cellulosic fibres, chemically. The acid dyes consist of Azo, Anthraquinone, Triphenylmethane, Azine etc.

Acid Dyes are of following different types :

1. Simple Acid dyes.
2. Mordant Acid dyes.
3. Pre-metallised Acid dyes.

1 **Acid simple dyes** : When acid dyes are applied to wool the bond between dye-anions and amino groups in the fibre are easily broken and reformed, and in consequence many of the dyes migrate in hot wet conditions. Ease of migration is an advantage and it gives good levelling properties but it leads to poor fastness to wet treatments.

2. **Acid Mordant Dyes**: Acid dyes that can be combine simultaneously with a mordanting substance, most generally a complex and hydrated Chromiumhydroxide, and with the fibre are called mordant dyes. The reducing agent is usually the wool fibre. In some cases the dye or added organic Acid such as formic Acid or oxalic acid may serve as reducing agents. Mordant acid dyes are used for the best fastness to light, washing, milling, etc.

3. Acid Pre-Metallised Acid Dyes:

(a) Acid 1:1 Metal Complex dyes:

1. Acid 1:1 metal complex dyes with sulfonic Acid groups for solubility.
2. Acid 1:1 metal complex dyes reacted with colourless complex builders. They contain solubilizing groups but no sulfonic Acid Groups.

3. Contain one Metallic atom for each dye molecule.

(b) Acid 2:1 Metal Complex dyes

1. Acid 1:2 Metal complex dyes containing solubilizing groups but no sulfonic Acid groups.
2. Acid 1:2 metal complex dyes without any solubilizing groups.
3. 1:2 metal complex dyes containing one metallic Atom to Two dye molecules.
4. The metal is chromium but sometime cobalt and iron are used.

Details of Dyeing (Acid Dyes)

1. Acid simple Leveling Dyes:

The dyes of this group requires strongly Acid dye bath employing sulphuric or formic Acid. The PH of the dye bath must be about 2.5 to 3. Wool is dyed with glober's salt + sulphuric Acid or formic Acid. The dyeing temperature at the start is 50°C. Then it is raised to boil gradually and further dyed at about 45 to 60 minutes and finally rinse.

(1) Globber salt (calcined) + 10 to 12%

(2) Formic Acid = 5%

2. Acid milling dyes:

The dyestuffs are dyed in neutral or weakly acid bath and in certain cases at pH around 4 to 4.5. Wool is dyed with Globber salt + Ammonium sulphate or Acetate or Acetic Acid at temp. raising from 50°C to near boil for about 45 to 60 minutes. For heavy shades small addition of sulphuric is necessary. Finally the material is rinsed. The shades obtained with this group of dyes are bright with good all round fastness properties.

(1) Globber salt (calcined) + 10 to 12%

(2) Sulphuric Acid = 5%

3. Metal complex Dyes :

3 a Acid 1:1 Metal complex Dyes :

The dyes requires strong acids like sulphuric Acid for dyeing at pH around 2 to 2.2 . The dyeing is carried out with glober salt + sulphuric Acid starting at 60°C and raising to near boil. Time of dyeing at near boil shall should be around 60-90 minutes. In this

(1) Globber salt (calcined) = 10%

(2) Acetic Acid = 10%

3 b Acid 2:1 Metal complex Dyes:













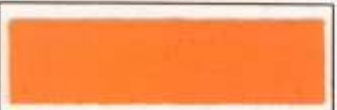
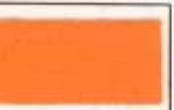

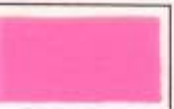
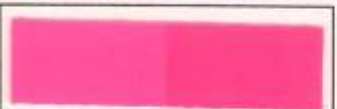



The dyeing is carried out in a weakly acid dye bath at pH 5.5 to 7. The dye bath consists of a levelling agent + Ammonium Acetate or sulphate. The dyeing is carried out at a temperature of 50°C. and gradually raising to near boil and finally rinsed. Time is about 45-90 minutes.

(1) Globber salt (calcined) = 10 to 12%

(2) Ammonium Acetate = 5%

(3) Acetic Acid = 5%

After completion of dyeing goods are first washed properly in cold water and then dried in air.

		ACID DYES
1%	2%	
		Yellow G *Yellow -11
		Yellow 5GN *Yellow -110
		Yellow 2G *Yellow -17
		Yellow MR *Yellow -42
		Metanil Yellow *Yellow -36
		Orange G *Orange-74
		Orange II *Orange-7
		Rhodamine B Cons *Red-52
		Rhodamine B (400%) *Red-52
		Red 3BN *Red-131

ACID DYES

1%

2%



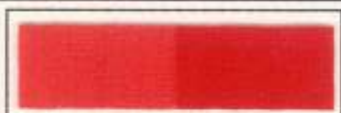
Geramine 6B
*Violet -7



Rose 2G
*Red-1



Scarlet 3R
*Red-18



Scarlet M00
*Red-73



Fast Red A
*Red-88



Red AS
*Red-88



Red RS (200%)
*Red-114



Brilliant Mustars



Brown RD
*Brown-14

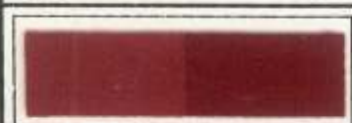


Brown GR

ACID DYES

1%

2%



Brown HE

*Brown-75



Maroon V

*Red-119



Green V

*Green-16 333%



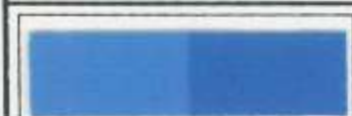
Dark Green B

*Green-20



Patent Blue AS

*Blue-7

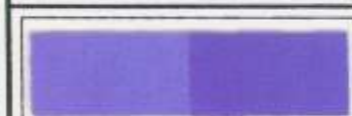


Blue G

*Blue-9

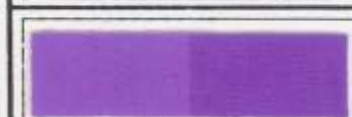


Blue GR



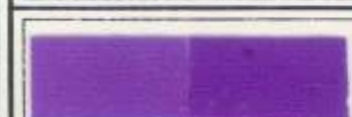
Blue FF

*Brown-15



Violet 5BN

*Violet-17



Violet 4BS

*Violet-49

		ACID DYES
1%	2%	
		Blue MTR *Blue-113
		N Blue S5R *Blue-113
		N Blue S7R
		N Blue 2RNX *Blue-113
		Black BX
		Black 10BX *Black-1
		Black 210 *Black 210
		Black 234 *Black-1
		Black MSRL *Black-1
		Black WA *Black-52

ALWAYES INSIST

