



TX Pigment Dispersions

TX Dispersions™ are fluorescent pigment dispersions that have been formulated for use in a broad range of applications including water-based textile printing, pad dyeing, pigment exhaust dyeing, printing inks, paper coating and poster colors.

The **TX Dispersions** are based on DayGlo's GOTS 3.0 approved **ECO Pigments™**. These revolutionary colorants are created using recycled materials and offer high tinctorial strength, excellent dispersion stability and unsurpassed thermal characteristics.

TX Dispersions offer uncompromising performance in earth-friendly products that are free of the following chemicals.

- Formaldehyde
- Alkylphenols
- Alkylphenols Ethoxylates
- Azo Compounds
- Aromatic Amines
- Bisphenol A (BPA)
- SVHC Chemicals
- Heavy Metals
- Perfluorooctanoic Acid
- Regulated Phthalates
- Polyaromatic Hydrocarbons
- Acrylonitrile
- Styrene
- California Prop. 65 Chemicals

TX Dispersions also have the following characteristics.

- Oeko-Tex 100 compliant
- CONEG compliant
- EN-71 compliant
- RoHS compliant
- Non-Toxic
- Zero VOC
- Made with recycled materials
- REACH compliant

Available Colors

Color	Product Code	Color	Product Code
Aurora Pink®*	TX-11	Signal Green™*	TX-18N
Rocket Red™*	TX-13	Horizon Blue™*	TX-19
Fire Orange™*	TX-14	Ultra Violet™	TX-20
Blaze Orange™*	TX-15	Rose	TX-2021
Saturn Yellow®*	TX-17	Corona Magenta™*	TX-21

*Trademark of Day-Glo Color Corp., Cleveland, OH

Typical Physical Properties

Pigment Particle Size	1.5 - 1.7 microns
Pigment solids	50 +/- 2%
pH	6.5-7.5
Viscosity	1500-2500 cps*
Density	1.1 g/ml (9.2 lbs./US gallon)

* **TX Dispersions** are thixotropic in nature, stir thoroughly before using.

Formulations

Screen Ink

44.75	Water
5.00	Glycerin
0.25	Natrosol 250 MHBR (Ashland Chemical)
10.00	ASE-95NP (Dow Chemical)
as needed	Aqueous Ammonia
20.00	Rhoplex ECO-3482 (Dow Chemical)
<u>20.00</u>	TX Dispersion
100.00	

1. Mix water and glycerin.
2. Dissolve Natrosol using high speed disperser.
3. Add ASE-95NP with slow agitation.
4. Adjust pH to 7.6-8.0 using aqueous ammonia.
5. Add Rhoplex ECO-3482 with slow agitation.
6. Add TX dispersion with slow agitation.
7. Cure prints at 160°C for 3 minutes.

Print Paste

60	Thickener Solution - 90/10 Water/Dow ASE-95NP, adjust pH with aqueous ammonia
20	Dow Rhoplex E-2680/1642RBC Self-Crosslinking Acrylic Polymer
<u>20</u>	TX Dispersion
100	

Dried @ 50°C
Cured 170°C for 3 minutes

Fastness Properties

Colorfastness to Laundering

AATCC Test Method 61-2A, Atlas Launder-ometer, AATCC Std. Detergent w/OB and Multifiber Fabric No. 10

Fading rated using AATCC Gray Scale for Color Change, 5 = No Change to 1 = Significant Change

Staining rated using AATCC Gray Scale for Staining, 5 = No Staining to 1 = Significant Staining

Product Code	Fade	Staining					
	Resistance	Wool	Acrylic	Polyester	Nylon	Cotton	Acetate
TX-11	4	4.5	4.5	4.5	4.5	4.5	4.5
TX-13	4	4.5	4.5	4.5	4.5	4.5	4.5
TX-14	4	4.5	4.5	4.5	4.5	4.5	4.5
TX-15	4	5	5	5	4.5	5	4.5
TX-17	4.5	4.5	5	5	4	5	4
TX-18N	4.5	4.5	5	5	4	5	4
TX-19	4.5	4.5	5	5	4	5	4
TX-20	3.5	4.5	4.5	4.5	4.5	4.5	4.5
TX-2021	4	4.5	4.5	4.5	4.5	4.5	4.5

Colorfastness to Water

AATCC Test Method 107

Fading rated using AATCC Gray Scale for color change, 5 = no change to 1 = significant change

Staining Rated using AATCC Gray Scale for staining, 5 = no staining to 1 = significant staining

Product Code	Fade	Staining					
	Resistance	Wool	Acrylic	Polyester	Nylon	Cotton	Acetate
TX-11	5	5	5	5	5	4.5	5
TX-13	5	5	5	5	5	4.5	5
TX-14	5	5	5	5	5	5	5
TX-15	5	5	5	5	5	5	5
TX-17	5	5	5	5	5	4.5	4.5
TX-18N	5	5	5	5	5	5	5
TX-19	5	5	5	5	5	5	5
TX-20	4.5	5	5	5	5	4.5	5
TX-2021	5	5	5	5	5	4.5	5

Crocking Result

AATCC Test Method 8

Crock samples rated by AATCC Gray Scale for staining, 5 = no staining to 1 = very severe staining or transfer

Product Code	Dry Face	Wet Face
TX-11	4.5	3
TX-13	4.5	3
TX-14	4.5	3
TX-15	4.5	3
TX-17	4.5	3
TX-18N	4.5	3
TX-19	4.5	3
TX-20	4.5	3
TX-2021	4	3

Cationic Pigment Exhaust Dyeing (6% pigment OWF*)

1. Using a 20:1 liquor ratio, let fabric circulate in bath for 5-10 minutes to allow fabric to wet out completely.
2. Add Cationic Pretreatment (6% OWF): Added Orco PT-92L cationic pretreat (6% OWF). Add NaOH (0.5 g/L, pH around 12) heat to 140°F/60°C and hold for 20 minutes.
3. Drop bath, DO NOT neutralize. Refill, (pH should be ~9.5)
4. Add pigment (6% OWF) cold, let circulate ~10 minutes.
5. Heat @ 4°F/minute to 120°F/49°C.
6. Add Orco G-30L binder (6% OWF, 1:1 binder:pigment) SLOWLY over 10 minutes. Circulate for 10 minutes at 120°F/49°C.
7. Heat @ 4°F/minute to 140°F/60°C.
8. At 140°F/60°C, add diluted acetic acid (10% solution) SLOWLY to lower pH to 4.5-5. Hold for 20 minutes.
9. Cool to 120°F/49°C.
10. Drop and rinse until bath is clear and pH is neutral.

*On the Weight of the Fabric