

Technical Bulletin

T/GT PIGMENTS

DayGlo® T/GT pigments are thermoset, fluorescent pigments that are recommended for applications where solvent resistance is required.

GT pigments have higher color strength than T pigments and are based on the same thermoset resin matrix. All are insoluble in a greater number of solvents than are DayGlo A/AX thermoplastic pigments. DayGlo T/GT pigments are designed to be used in formulations and coatings where strong solvents are used and where softening by heat and pressure may be a problem. They are also suitable for use in water based latex systems, where long-term shelf stability is required.

Available Colors:

T/GT Colors*	<u>T-series</u>	<u>GT-series</u>
Aurora Pink®	T-11	GT-11
Rocket Red™	T-13	GT-13
Fire Orange™	T-14	GT-14N
Blaze Orange™	T-15	GT-15N
Arc Yellow [™]	T-16	
Saturn Yellow®	T-17N	GT-17N
Signal Green™	T-18N	
Horizon Blue™	T-19	
Corona Magenta™		GT-21

^{*}Trademarks of Day-Glo Color Corp.

Typical Physical Properties:

Specific Gravity
Hegman Grind
Average Particle Size
Decomposition Point
Oil Absorption (Raw X Linseed Oil)
Bulking Value
General Solubility

5.0 minimum 4.0-5.0 microns (by volume) Approximately 195°C (383°F) 51 lbs Oil / 100 lbs 0.0875 gal / lb

Insoluble in water, hydrocarbons, and

many common solvents



1.37

Solvents:

T/GT pigments are substantially resistant to the following solvents and plasticizers.

AQUEOUS	KETONES	
Water	Acetone	
ALIPHATICS	Cyclohexanone	
Heptane	Diacetone Alcohol	
Lactol Spirits	Diisobutyl Ketone	
Mineral Spirits	Ethyl Amyl Ketone	
VM & P Naphtha	Isophorone	
AROMATICS	Methyl Ethyl Ketone	
Toluene	Methyl Isobutyl Ketone	
SC #100 (KB Value 91)	HALOGENATED & MISC.	
SC #3 (KB Value 72)	Carbon Disulfide	
Xylene	Carbon Tetrachlorride	
ALCOHOLS	Trichloroethylene	
Ethyl Alcohol	PLASTICIZERS	
3-Heptanol	Dioctyl Adipate	
Isobutyl Alcohol	Dioctyl Phthalate	
Isopropyl Alcohol (99%)	Dioctyl Sebacate	
Methyl Alcohol	Paraplex G-50	
GLYCOLS	Paraplex G-62	
Diethylene Glycol	ESTERS	
Ethylene Glycol	Butyl Acetate	
Glycerine	DPM Acetate	
Hexylene Glycol	Ethyl Acetate	
Propylene Glycol	Isoamyl Acetate	
	Isopropyl Acetate	
	N-Propyl Acetate	
	PM Acetate	

Mixtures of some solvents may have a more severe effect on T/GT pigments than the individual solvents alone. An example of such a mixture is equal parts of methyl ethyl ketone and ethyl acetate. This mixture, will partially solvate the pigments producing some bleed and swelling of the pigment. Each solvent alone will not.

It is impossible to completely evaluate the effect of all solvents and mixtures of solvents on the T/GT pigments. They should be tested for satisfactory performance in the system in which they are intended to be used.

DISCLAIMER: Our technical advice, information and statements - given verbally, in writing or in the form of test results are offered for your guidance without warranty. **NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE**. This also applies where protective rights of third parties are involved. It does not release the user from the obligation to test the suitability of the products and formulas for the intended process and applications. Our guarantee is limited to the consistent quality of our products.



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Dispersion & Use:

Being organic in nature, the pigments are, in most cases, easily wet out and dispersed in solvent-based vehicles or liquid resins by intensive stirring (Cowles Dissolver). Formulations produced by such means give Hegman Gauge readings of 4.5 to 5.0 for application by spray, brush and roll, or knife coating. If finer particle sizes are required, T/GT pigments can be wet ground in suitable formulations by wet milling.

The fact that T/GT pigments are based on a thermoset resin permits them to be used in various coatings or inks made with nitrocellulose, polyvinyl chloride-acetate, polyamide, acrylic, chlorinated rubber and other resins which require strong oxygenated types of solvents such as aromatics, alcohols, esters or ketones. Combinations of these solvents should be evaluated before use.

Color bleed may be a problem in some instances, usually with the red colors. It can occur even though the pigment resin matrix is thermoset and insoluble, and the fluorescent dye is in solid solution throughout the pigment particles and not merely absorbed on the surface. Some solvents leach enough dye from the insoluble particles so that color transfer may be noticeable when the coating surface involved contains significant amounts of plasticizers.

T/GT pigments are suitable for paper coating applications, either solvent or water latex based. Since the pigments are not softened by heat or pressure, the coated paper can be calendared without glazing or sticking to the rolls.

The following formulae are suggested as a starting point for using T/GT pigments:

Aerosol Concentrate

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Acryloid F-10 ¹ Post 4 ² DayGlo T/GT pigment	44.6 1.2 34.8		
Lactol Spirits Toluene	17.0 1.8	6	
	100.0	0	

Parts by Weight

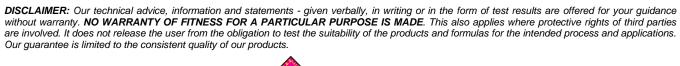
C-Type Gravure Ink

Parts by Weight

DayGlo T/GT pigment	40.0
RS Nitrocellulose 30-35 Sec. (70% in Toluol)	11.0
Hercolyn D ³	5.0
S-395-N5 Wax ⁴	2.0
Isopropyl Acetate	21.0
Toluene	<u>21.0</u>
	100.0

¹Dow

Ver. 20171030





²Elementis Specialties

³Pinova Solutions

⁴Shamrock Technologies