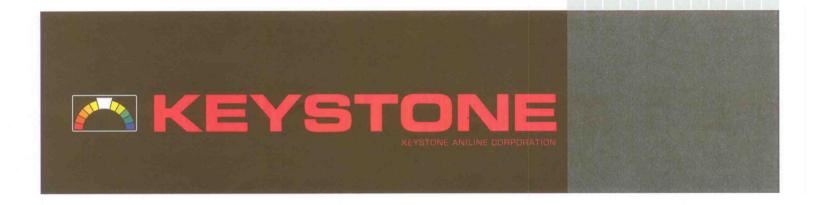
TECHNICAL BULLETIN



DYES FOR INKS

Writing and Marker Inks / Ink Jet

Changing the way you think about color

EAGLE Registrations Inc.



Keystone Aniline R&D Laboratories TECHNICAL BULLETIN



DYES FOR INKS Writing and Marker Inks / Ink Jet

- Keyacid powder dyes
- Keyacid/ Keyamine/ Keyreact liquid dyes
- Keyazine powder dyes
- **■** Keyfast Spirit powder dyes
- Keystone Liquid Oil dyes
- Keystone R-O dyes
- Morfast[™] dyes

Keystone offers a very wide and complete range of dyes for use in all aspects of writing inks, markers, highlighters, and ink-jet applications. Keystone dyes are made in both powder and liquid forms for both aqueous and solvent based systems.

A brief summary of various ink applications along with recommended Keystone dye groups is followed by a complete listing of the dyes.

INK APPLICATIONS AND RECOMMENDED KEYSTONE DYE GROUP

Application	Dye Group			
Fiber Tip Pens	Keyacid powders			
(aqueous)	Keyacid/ Keyamine/ Keyreact liquids			
	Keyazine powders			
Fiber Line	Keyacid powders			
Pens	Keyacid/ Keyamine/ Keyreact liquids			
(aqueous)	Keyazine powders			
Roller Ball	Keyacid powders			
Pens	Keyacid/ Keyamine/ Keyreact liquids			
	Keystone R-O liquids			
Overhead	Keyacid powders			
Projection	Keyacid/ Keyamine/ Keyreact liquids			
Pens	Keystone R-O liquids			
Highlighter	Keyacid powders			
Markers	Keyacid/ Keyamine/ Keyreact liquids			
Felt Pen	Keystone Liquid Oil dyes			
Markers	Morfast™ liquids			
(solvent)	Keyfast Spirit powders			
Ink Jet				
(aqueous)	Keystone R-O liquids			
Ink Jet	Morfast™ liquid			
(solvent)	Keyazine powders			
	(alcohol systems only)			



DYES FOR INKS Writing and Marker Inks / Ink Jet

KEYSTONE KEYACID POWDER DYES

Keyacid powder dyes are extremely high strength colorants soluble in water and glycols and can also be used in alcohol and glycol ether systems. Keyacid powder dyes have little or no standardizing salts added such as chlorides and sulfates, however these may be present in small quantities from the reaction process of the dye. For applications that require virtually salt free dye, Keystone R-O dyes should be considered.

Product Name / Code	Color*
Keyacid Chinoline Yellow Super 80100385	
Keyacid Pyranine 10G 40600760	
Keyacid Tartrazine W Super 80102371	
Keyacid Metanil Yellow Super 80103654	
Keyacid Orange Y 50100750	RUNGER !
Keyacid Eosine OJ Super 60108780	
Keyacid Brill Red XB Super 60105285	
Keyacid Violet 5BNS Super 70101760	
Keyacid Blue FG 20100950	
Keyacid Ink Blue P 20109350	
Keyacid Brilliant Green G 40172050	
Keyacid Nigrosine 02P Super 10100247	

KEYSTONE KEYACID, KEYAMINE AND KEYREACT LIQUID DYES

Keyacid, Keyamine and Keyreact Liquid dyes are exceptionally high strength, anionic, aqueous based liquid concentrates with generally very low salt contents.

Product Name / Code	Color*
Keyacid Uranine K Liquid 80107342	1000
Keyacid Metanil Yellow Liquid 80103643	
Keyacid Tartrazine W Liquid 80102333	
Keyamine Red 8BL Liquid 60525450	
Keyacid Brill Red XB Liquid 60105233	
Keyreact Red F3B Liquid 60918031	
Keyacid Orange Y Liquid 50100740	HEIRIGH
Keyacid Blue FG Liquid 20100931	
Keyamine Turquoise FBL Liquid 20519948	
Keyamine Direct Black SP Liquid 10540742	
Keyacid Nigrosine 2BP Liquid 10100231	1 (1 (T) (T)

^{*} The color shades illustrated within this technical bulletin are designed to give a general idea of the color characteristics of each dye, not a guarantee of how the dye will look in a particular formulation. Different viewing monitors and screen resolutions as well as the specific application may give a different variation of the actual color.

DYES FOR INKS Writing and Marker Inks / Ink Jet

KEYSTONE R-O LIQUID DYES

Keystone R-O liquids are highly refined, liquid dyes with exceptionally low salts content (chlorides and sulfates) for use in ink jet and other exceptionally salt critical applications.

Product Name / Code	Color*
Keyacid Tartrazine RO liquid 801-023-22	1-69:93
Keyamine Yellow RL-RO liquid 805-086-82	- 14 P T
Keyacid Magenta XB-RO liquid 601-052-72	
Keyreact Red F3B-RO liquid 609-180-82	
Keyamine Blue FG-RO liquid 201-009-72	
Keyamine Blue GB-RO liquid 205-199-72	
Keyamine Black F-RO liquid 105-168-42	
Keyamine Black G-RO liquid 105-019-72	

KEYSTONE KEYAZINE DYES

Keyazine dyes are cationic, exceptionally brilliant and high strength powders with no added salt diluent. Keyazine dyes are water soluble but for ink applications are most widely used in alcohol, glycol or glycol ether systems.

Product Name / Code	Color*
Keyazine Yellow DEA 80303752	
Keyazine Rhodamine 6GDN 60300160	
Keyazine Rhodamine HDC 60300175	
Keyazine Rhodamine B 500% 70301050	
Keyazine Rhodamine F3B 70301150	
Keyazine Crystal Violet 6B 70300350	
Keyazine Victoria Blue BO-ZF 20300750	
Keyazine Black DS-G 10340553	

^{*} The color shades illustrated within this technical bulletin are designed to give a general idea of the color characteristics of each dye, not a guarantee of how the dye will look in a particular formulation. Different viewing monitors and screen resolutions as well as the specific application may give a different variation of the actual color.