

Technical Data Sheet

HM & HMS Solvent Soluble Toners

General description

DayGlo HM and HMS Soluble toners are high strength, transparent fluorescent colorants. They're specifically designed for flexo and gravure application on flexible packaging papers, films and foils.

DayGlo HM Soluble toners are standard strength, whereas the DayGlo HMS offer higher strength to provide ink manufacturers increased scope in their formulations. Water-washable and moisture-set letterpress inks can also be made from these toners.

Both toners are transparent and should be printed on white stock or over a white ink for maximum daylight fluorescent brightness.

In flexographic trial press runs, inks made with these toners have been run at speeds up to and exceeding 600 feet/minute. The tests were conducted on treated polyethylene using both a co-solvent polyamide white ink and a nitrocellulose modified alcohol soluble polyamide white to back the fluorescent inks. The formulations used for the fluorescent inks are included in this bulletin.

We advise thorough testing of their suitability before carrying out any large-scale commercial runs.

Available Colors

Product Code	Color
HM-11	Aurora Pink*
HM-13	Rocket Red*
HM-14	Fire Orange*
HM-15	Blaze Orange*
HM-21	Corona Magenta*
HM-35	Brightener
HMS-30	Strong Corona Magenta*
HMS-34	Strong Saturn Yellow*

Packaging:

1 box = 55lb (21kg)
 2 Gallon Pail (3.8L)

Storage & shelf life:

120 months when kept in closed original packaging in a dry place at ambient temperature.

Safety & regulatory:

Safety Data Sheet available on request.

Physical properties

Delivery form	Granular Powder
Specific gravity:	1.38
Softening point:	90°C Min
General solubility:	Soluble in some esters, ketones, glycols, glycol ethers and alcohol/ester blends. Insoluble in water, aliphatic and aromatic hydrocarbons.

Lightfastness

Inks made from DayGlo HM and HMS Soluble Toners are intended for indoor uses only. They are not recommended for window use or outdoor exposure. Different modifying resins will have varying effects on the lightfastness of the finished product. Suitable tests should be conducted.

HM-35 Brightener

HM-35 Brightener is used to extend HMS Soluble Toner ink systems and yet will maintain brightness. Colorless in normal daylight, it glows vivid blue under ultraviolet light, making it useful as a tracer.

HMS Soluble Toners

HMS Soluble Toners are used where extra strength is desired or there is a need to reduce the amount of toner in an ink system. HM and HMS can be blended to give intermediate shades of color. For example, Strong Yellow, HMS-34, when mixed with Aurora Pink, HM-11, produces very clean oranges with intermediate strength.

Recommended Solvents		
HM	80% Ethyl Alcohol and 20% Ethyl, Isopropyl or N-Propyl Acetate	
HMS	75% Ethyl Alcohol and 25% Ethyl, Isopropyl or N-Propyl Acetate	
Ethyl Acetate	Acetone	Methyl Ethyl Ketone
Cellosolve ¹	Ethylene Glycol	Methyl Isobutyl Ketone
Diethylene Glycol	Propylene Glycol	2-Nitropropane

¹Union Carbide Co.

Other solvents or solvent blends may be acceptable, and their suitability should be thoroughly tested before production

Compatible Modifying Resins	
DLX-3-5 Nitrocellulose	Nobel NC Limited
Ethocel Standard 10 Industrial	DuPont.
Cellulose Acetate Propionate (CAP-504-0.2)	Eastman.
Cellulose Acetate Butyrate (CAB-553-0.4)	Eastman.
Krumbhaar Resin K-1717-B	Lawter Chemicals Inc.
Foralyn™ 110-FG	Synthomer
Elvacite 2043	Lucite International
Acryloid B-66	Dow
Butvar B-79	Monsanto Co.
UCAR VYNC-P	Dow.

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HM/HMS toners are not compatible with polyamide resins but make excellent inks for printing treated polyethylene when modified with nitrocellulose or propionate resins.

Toxicity

DayGlo HM and HMS Soluble Toners are non-toxic and contain no heavy metals or inorganic phosphors. Toxicity on typical HM and HMS samples has yielded the following results:

Acute Oral Toxicity LD50 g/kg > 23.1 Acute Dermal Toxicity LD50 g/kg > 10.2 Acute Dust Inhalation 3.0

Eye Irritation - mildly irritating