SUN CHEMICAL® PANTONE® NPS

Sun Chemical PANTONE NPS is a ready-to-print offset base ink mixing system. Suitable for sheetfed printing of packaging, labels and any other spot colour work on fibre-based substrates as paper and board. For use on all types of multicolour sheetfed offset presses up to 12 colours printing straight ahead or perfecting. Exceptional lithographic stability and excellent ink lay in solids and screened pictures.

Sun Chemical PANTONE NPS base inks are finished inks and comply with the colour specifications of Pantone Inc.

Sun Chemical PANTONE NPS can be printed in-line with water-based coatings or in-line/off-line with oil-based sealers to accelerate the print shop workflow. The application of UV coatings (in-line or off-line) might require the use of a primer. When printing without in-line coating, Sun Chemical does not recommend the use of IR dryers.

Our certified Pantone NPS assist to close the loop between innovative art studios and printwork.

working for you.

SunChemical®
a member of the DIC group

SUN CHEMICAL® PANTONE® NPS

CHARACTERISTICS

Excellent lithographic stability at all press speeds
Excellent performance on long perfecting presses
Based on vegetable technology and mineral oil free
Fast absorption and setting*
For all fibre-based substrates
Very good stack capability*
Very fast work and turn*
Good gloss*
Very good mechanical resistance*

*Depent on substrate

SPECIAL APPLICATIONS AND PRECAUTIONS

Sun Chemical PANTONE NPS is optimised for printing on absorbent substrates as paper and cardboard. Difficult substrates as chromocarton, PE-coated board do not allow the penetration of printing ink oil. To improve oxidative drying and adhesion on such substrates, 10-20% Foils Paste H 5068 should be added. The use of 1% Grafo drier is favourable.
Adhesion and drying on difficult substrates cannot be precisely predicted. Product oriented testing is absolutely recommended before running a commercial print.
For printing on plastics and foils, Sun Chemical offer special Foils inks and a wide range of UV curable inks.

SPOT COLOUR SPECIFICATION

Sun Chemical PANTONE NPS base inks are designed to match all shades which are shown in the PANTONE Colour Guide. First guideline for matching these shades is the recipe printed in the colour guide.
Depending on the colour (whiteness) and surface properties one and the same spot colour might appear differently when being printed on various substrates. Further to this it must be noted that most colours change during the drying process of the ink. If the print is in-line varnished this effect is minimised. These effects must be respected if a precise colour specification is agreed.
Dark colours and those of high colour strength often show the so-called bronzing effect which is a colour impression varying with the observation angle. This is not a product failure and influenced by the surface of the substrate. In-line varnishing or foil lamination eliminates the bronzing effect.

ENVIRONMENTAL

It is Sun Chemical's policy to reduce progressively ecological impacts and resource intensity throughout the life-cycle of their products. When selecting raw materials we follow strictly the EuPIA Raw Material Exclusion List (www.eupia.org) and respect the CONEG regulation on toxic heavy metals. Sun Chemical PANTONE NPS is vegetable based.

FOUNTAIN SOLUTIONS

Sun Chemical PANTONE NPS process inks are compatible with a wide range of fountain solutions. Isopropanol (IPA) reduction or elimination is supported. Sun Chemical recommends the following ideally adapted products:
SunFount 410; suitable for 5-7% IPA in normal water qualities
SunFount 480; suitable for 3-6% IPA, to prevent roller glazing
SunFount 455; suitable for 0-5% IPA, adapted for IPA free printing
The quality of the water and the overall printing conditions has a strong impact on the choice of fountain solution and the level of IPA required. Please consult our technical services for assistance.

WATER-BASED OVERPRINT VARNISHES

Sun Chemical offers a full portfolio of water-based overprint varnishes. The final choice depends on individual press conditions, the substrate used and the expectations on the print regarding visual appearance. The following products are widely used:
SunCoat 2431 gloss coating, suitable for work & turn jobs on paper and board
SunCoat 9265 matt coating, suitable for work & turn jobs on paper and board
SunCoat 9205 primer for in-line UV coating
SunCoat 9206 primer for off-line subsequent UV coating

APPLICATION INFORMATION
Sun Chemical PANTONE NPS process inks dry by absorption and oxidation. They are duct fresh and supplied ready for use. The use of additives is not required.
Sun Chemical PANTONE NPS is suitable for all types of offset printing plates.
Sun Chemical PANTONE NPS is not recommended for sensitive food packaging and outdoor posters or for printing on impervious substrates (films, foils).

For further detailed application advice please contact our technical services. A Material Safety Data Sheet is available on request.

FASTNESS AND RESISTANCE REQUIREMENTS
During its lifetime, a print might change its colour. Light fastness and resistance parameters describe the ability of the print to maintain the colour under the conditions of its application. The product table (see page 3 of this document) contains the evaluated parameters using test methods agreed in international standards.
The parameters of the pure base inks may differ from those of a blended spot colour. As a general rule, it is the base ink with the lowest resistance that defines the overall fastness/resistance value. Higher pigmented inks are usually more persistent, the resistance is reduced the more the strength of the shade is reduced. Resistance levels can also vary in practice caused by a number of factors as pigment compositions, substrate, colour strength, film weight used, the printed picture (solids, screened half-tones), storage conditions, exposure time etc.

LIGHT FASTNESS
Light fastness is important where prints are exposed to sunlight. Inks for outdoor poster application should reach at least a light fastness of WS 6 (and should be alkali resistant because of the potential use of alkaline glue).
The light fastness for inks for packaging varies with the intended use. Packaging which are supposed to be stored under illuminated conditions should have a light fastness of not lower than WS 5.

CHEMICAL RESISTANCES
Resistance properties play a role when the prints are processed (varnishing, foil-laminating) or the prints are exposed to chemicals, as detergents. Water-based overprint varnishes may contain solvents or ammonia, which can require the resistance against alkaline and alcohol. A test under practice conditions is advised.
UV coatings contain monomers which might have an impact on the print. Often alkaline, alcohol and solvent resistance are demanded. Again, a test under practice conditions is recommended.

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PROCESS COLOURS	PRODUCT CODE	LIGHT FASTNESS ISO 12040	ALCOHOL ISO 2836	SOLVENT MIXTURE ISO 2836	ALKALI ISO 2836
PANTONE Yellow G 26100	**NPS18**	5	+	+	+
PANTONE Yellow 012 G 26120	**NPS15**	5	+	+	+
PANTONE Orange 021 O 26200	**NPS21**	5	+	+	+
PANTONE Warm Red R 26306	**NPS31**	3	-	-	-
PANTONE Red 032 R 26301	**NPS32**	5	-	-	+
PANTONE Rubine Red R 26700	**NPS42**	5	+	+	-
PANTONE Rhodamine Red R 26720	**NPS55**	4	-	-	-
PANTONE Purple P 26760	**NPS51**	4	-	-	-
PANTONE Violet P 26770	**NPS52**	4	-	-	-
PANTONE Blue 072 B 26401	**NPS60**	4	-	-	-
PANTONE Reflex Blue	**NPS91**	3	-	-	+
PANTONE Process Blue B 26420	**NPS17**	8	+	+	+
PANTONE Green V 26500	**NPS71**	8	+	+	+
PANTONE Black S 26900	**NPS50**	8	+	+	+
PANTONE Transparent White W 26000	**NPS48**				

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