

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 is not suitable for sensitive food and tobacco packaging. For these jobs we recommend IROCART GN Low Hex or IROCART LMQ.

Characteristics

Excellent lithographic stability at all press speeds

Very good mechanical resistance (#)

Low tack

Excellent ink lay

Drying by absorption and oxidation

For all fibre-based substrates

Suitable for all types of CTP lithographic plate

Fast absorption and setting (#)

Very good stack capability (#)

Good dot reproduction

Good gloss (#)

For straight and perfecting printing

Vegetable based

Duct fresh

(#) **Dependent 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

With Sun Chemical PANTONE® NPS base inks easily all shades which are shown in the PANTONE® NPS Colour Guide could be matched. 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 eliminate the bronzing effect.

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 are unlike to 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 closed to a window 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 high percentage of 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.

Press auxiliaries

Sun Chemical as leading supplier of the Graphic Arts industry offer the full variety of press auxiliaries and other pressroom chemicals to be used with Sun Chemical Pantone NPS spot colours:

SunFount fountain solutions allow printing with reduced IPA or IPA free. For inline finishing there are water-based, oil-based or energy curable overprint varnishes available. The proper choice depends on the pressroom equipment, on the substrate and various other parameters. Sun Chemical is happy to assist in selecting the right products for your application.

Sun Chemical PANTONE® NPS

| | 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 B 26430 | NPS61 | 4 | - | - | + |
| 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 | | | | |

Material Safety Data Sheet is available on request

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