Technical Data Sheet

CXX-AM Series Inks

SunHytek™ family of Screen Automotive Inks

1. Description

SunHytek™ CXX-AM series screen printing inks have been specifically formulated for use on 3 dimensional, formed automotive dashboard appliqués and fascias.

2. Product features*

- High Degree of Forming
- Excellent wide ranging adhesion
- Satin finish
- Good scuff and mar resistance
- Superior opacity and density
- Pinhole free prints
- Complete Colour Mixing System
- Non-Fogging
- Fast drying

*Specific application performance data, where available can be provided by your Sun Chemical representative.

3. Product Suitability*

3.1 Applications

SunHytek™ CXX-AM series inks are a full range of colours, opaque whites, dense blacks and other products specifically formulated for use on 3 dimensional automotive appliqués and fascias panels and are commonly used and recommended for the production of 3 dimensional automotive dashboard panels and interior fascias.

SunHytek™ CXX-AM series inks can also be used on 2 dimensional appliqués and fascias, however SunHytek™ CX series inks are usually used when complex or deep forming properties are not required.

3.2 Substrates

SunHytek™ CXX-AM series inks are recommended for use on polycarbonate, print receptive polyester and PVC and can be printed on the first or second surface.

3.3 Automotive Product Suitability

SunHytek™ CXX-AM series inks have been tested for automotive appliqué suitability and under the test conditions were found suitable for use. Common tests include:

Environmental cycle testing
Common forming suitability
Heat ageing
Scratch resistance
Cross cut and adhesive tape adhesion
Non-yellowing and colour change

However, customers should always satisfy themselves of full suitability for specific final use under their print conditions prior to commencing full production runs.

3.6 Forming

SunHytek™ CXX-AM series inks are suitable for both 2 and 3 dimensional automotive appliqués and have been designed to have good elongation characteristics when formed with common forming techniques.

As with any post print, formed product, pre-testing is recommended to ensure the geometry of the part is not outside the inks elongation and forming capabilities.

3.5 Overprinting

SunHytek™ CXX-AM series inks can be overprinted with solvent based, UV or waterbased matt varnishes or hardcoats commonly used in automotive applications.

For recommended overprint varnishes please refer to your local Sun Chemical representative.

3.4 Durability

SunHytek™ CXX-AM series inks have been formulated on lightfast pigments with a lightfastness of 7 – 8 on the blue wool scale (DIN 16525).

*Please refer to your local Sun Chemical representative for specific details.

4. Colour Range

CXX-AM Series Products			
C-Mix 2000 Base Colours			
Yellow	CXX/Y30-AM	Violet	CXX/V50-AM
Golden Yellow	CXX/Y50-AM	Blue	CXX/B50-AM
Orange	CXX/O50-AM	Red Shade Blue	CXX/B70-AM
Scarlet	CXX/R20-AM	Green	CXX/G50-AM
Mid Red	CXX/R50-AM	Black	CXX/N50-AM
Blue Shade Red	CXX/R70-AM	Blue Shade Black	CXX/N40-AM
Magenta	CXX/M50-AM	White	CXX/W50-AM
Opaque White	CXX 60/01-AM	Dense Black	CXX 65/03-HD-AM
Gloss Varnish / Base	CXX 70/01-AM	Matt Varnish / Base	CXX 70/02-MT-AM
Bright Silver	CXX 79/01-MG-AM		
Thinners, Retarder and Additives			
Thinner	CXV	Retarder	VZ10
Slow Thinner	VD60	Flow Additive	VM1
		Flow Additive	VM2

4.1 Colour Range

SunHytek™ CXX-AM series inks are available in the C-Mix 2000 colour range of 9 strong, bright mono-pigmented shades, plus some additional colours which together with black, white and base form a complete ink blending and mixing system. This mixing system allows a wide gamut of colours to be matched, perfect for the automotive appliqué and fascia panel business.

Other special colour matchings, transparent colours, smokes, dead front, metallic shades, etc are also available on request.

5. General Handling

5.1 Storage and shelf life

SunHytek™ CXX-AM series inks should be stored in the original sealed containers at temperatures between 5 – 30 ^{O}C. They have a minimum shelf life of 30 months, but can remain usable for longer periods depending on storage conditions.

For more specific handling advice refer to the Safety Data Sheet.

6. Printing Conditions

6.1 Viscosity Reduction

SunHytek™ CXX-AM series inks could require a degree of viscosity reduction before use. Thinners or retarder can be used at levels from 5 to 20% by weight to suit the specific print machine and conditions.

6.2 Drying

SunHytek™ CXX-AM series inks dry by evaporation of volatile solvent. These inks are best dried through a commercial jet drier at 50 to 85 ^{O}C, in 20 to 30 seconds, although prints can be air dried on racks in 2 to 5 minutes and dried in an oven.

Evaporation rate and hence drying speed is decreased by the use of retarder or slow retarder and drying times will vary depending on the substrate and print shop conditions. To avoid issues with overprinting and post processing, it is essential that these inks are fully dried before moving onto another print step.

It is always advisable to determine optimum drying schedules under specific conditions before starting full production runs.

6.3 Screen Stability

SunHytek™ CXX-AM series inks have been optimized for drying and screen stability, however should these products be found to dry too quickly on the screen, or if fine detail or tones are being printed then additions of slow thinner or retarder are recommended.

6.4 Printing materials

High quality stencil materials such as those in the SunCoat range are recommended for best results. Product data sheets and detailed specialist advice on choice of emulsions, films and all related stencil products can be obtained from your local Sun Chemical branch. Fine polyester mesh with a mesh count of 90 to 120 threads/cm and a medium/hard sharp polyurethane squeegee should be used.

6.5 Coverage

Up to 50 m^2/kg may be expected, but coverage is dependant on a number of printing factors including, mesh choice, stencil thickness, squeegee, etc.

6.6 Washing up

Commercial screen cleaners, such as those in the SunCoat range are recommended for best results. Product data sheets and advice on the SunCoat range of screenwashes is available from your local Sun Chemical branch.

7. Health, Safety and Environmental

7.1 Handling

SunHytek™ CXX-AM series inks should be used in accordance with normal standards of industrial hygiene. Please refer to the information provided on product labels and relevant safety data sheets.

7.2 Toys (Safety) Regulations EN71-3: 1995

These inks have been formulated to exclude heavy metal based pigments. However, inks are supplied without warranty due to risk of contamination throughout the many processing steps from raw materials to finished toy. To ensure conformity analysis is therefore essential. The inks may be analysed or alternatively the finished toy (note however that the legislative limits apply to the toy itself and not to the wet ink as supplied). Please refer to our company statement concerning inks for toys.

7.3 Environmental Concerns

SunHytek™ CXX-AM series inks meet the requirements of Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles.

8. Technical Assistance / Contacts

For further information, please contact your local Sun Chemical team.

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