

Series 140-6125

IR-transparent Screen Printing Ink for Glass

The Series 140-6125 is an IR-transparent screen printing ink based on highly resistant raw materials and consisting of two components (clear varnish and colorant) and an adhesion promoter. It is an easy-to-use system for the technical-industrial sector. In addition, the silicone-free formulation allows the ink to be overprinted with decorative inks.

The printed ink film is infrared transparent, which means that IR rays are transmitted, and visible light is blocked. Because of these properties, coating of infrared components for cell phones or remote controls, for example, is a common area of application.

Figure 1 shows that the IR ink has very high opacity with good IR transparency. Application with a 43-80 Y mesh is only suitable for some sensors due to the reduced IR transparency. Still, it may be of interest for special applications (e.g., curing an IR-sensitive adhesive through the ink layer).

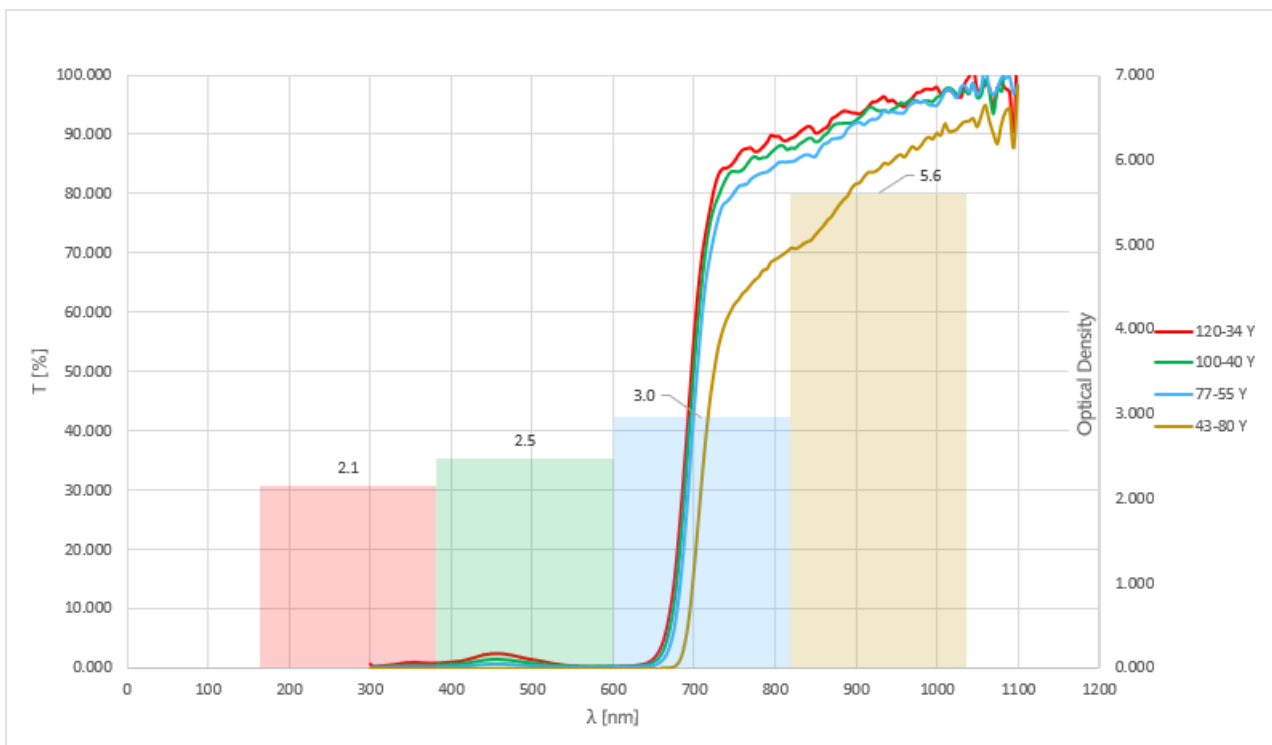


Figure 1 Achieved opacity and IR transparency with different meshes (clear varnish + colorant 70:30 with 3 % of adhesion promoter)

Product Range

Article	Description
Series 140-6125-05	Clear Varnish
Series 140-6125-29/1	IR Colorant SB 29-1, Black
Series 600-HVA	Adhesion Promoter A

Mixing Ratio

The components 140-6125-05 and 140-6125-29/1 are mixed in a ratio of 99:1 to 70:30.

Processing

We recommend the following processing order:

1. Add IR colorant to the clear varnish and mix (stir).
2. Add 3 % of adhesion promoter 600-HVA and mix (stir).
3. Usually, no thinner is necessary.
4. Print.
5. Drying¹: approx. 5 minutes at 80 °C (176 °F).
6. Overprint with decorative inks.
7. Curing: 30 minutes at 180 °C (356 °F).

Specifications

Thinner	Series 10-02459	
Addition ratio	5-20 % by weight (if necessary)	
Retarder	-	
Addition ratio	-	
Adhesion promoter	Series 600-HVA	
Addition ratio	3 % by weight	
Cleaner	Series 600-URS	
Mesh	43.80 to 180.31	
Drying	5 minutes at 80 °C (176 °F)	
Curing	30 minutes at 180 °C (356 °F)	
Substrates	Glass	
Application (indoor/outdoor)	Indoor (behind glass)	
Further processing	-	
Overprinting	Yes	
Available packaging	Series 140-6125-05	1 kg / 5 kg
	Series 140-6125-29/1	0.2 kg / 0.5 kg / 1 kg / 5 kg
	Series 600-HVA	0.1 kg / 0.2 kg / 0.5 kg / 1 kg / 5 kg
Shelf life (minimum)	Series 140-6125-05	6 months ²
	Series 140-6125-29/1	12 months
	Series 600-HVA	36 months
Others	Please note that the IR ink may stain the squeegee. However, this does not change its properties. We recommend solely using the squeegee to print the IR ink to avoid staining other print jobs.	

Important Information: Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application. You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilized by you with respect to any and all damages not caused intentionally or by gross negligence. (T34/T12 / V1 / 02/2023)

¹ A drying temperature of up to 100 °C (212 °F) is adequate. The drying time varies depending on the ink film thickness and the dryer/oven used.

² Long-term tests are currently being carried out. The minimum shelf life is constantly being increased on the basis of these tests.