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Norland Conductive Adhesive 130

Norland Conductive Adhesive 130 is a single component, silver filled, conductive adhesive for preventing static buildup and will cure tack free to a tough, resilient polymer when exposed to ultraviolet light and heat. It is recommended as a fast and efficient way to tack, fill, seal or bond precision components or wires in place. With this system, a drop of adhesive is used to form a bridge between the component or wire, and the substrate. Exposure to UV light quickly tacks the component in place. Heat curing must be used to fully cure the adhesive. Useful applications for NCA 130 include wire tacking and bonding of head gimbal assemblies.

NCA 130 is sensitive to the whole range of UV light from 320 to 400 nanometers with peak sensitivity around 365 nanometers. Cure time is dependent on light intensity and thickness of adhesive layer. The adhesive has been designed to be spot cured in small areas with hand held or desk top UV light sources that are safe and easy to use. Stronger light sources can also be used that will cure faster. Recommended maximum thicknesses for curing with UV light is 3 mils.

In addition to the UV cure, NCA130 contains a latent heat catalyst that can cure areas that do not see the ultraviolet light. The heat catalyst allows the adhesive to cure in 360 minutes at 80°C, 60 minutes at 100° C, or 15 minutes at 125° C using a convection oven. Temperatures less than 80° C will not appreciably activate the adhesive. Recommended maximum thickness for heat curing is 10 mils. The heat cure will bring thicker layers of partially cured adhesive to full cure or provide the user with a choice when curing. In order to create the electrically conductive feature of the adhesive, the material must be heat cured.

NCA 130 has very good adhesion to glass, metals, printed circuit boards and many plastics. Since the cure is very exothermic, the adhesive should be allowed to cool back to room temperature before adhesive testing begins.

Typical Properties of NCA 130	
Temperature Range	-150 to 150° C
Viscosity at 1rpm at 25° C	10,000 - 15,000 cps
Shelf Life	4 months from ship date

To remove uncured adhesive from substrate use an acetone or alcohol moistened cloth. The cured adhesive can be removed by prying the drop with a knife edge or soaking in a solvent combination of 90 parts methylene chloride and 10 part methanol.

NCA 130 Handling and Storage Precautions

CAUTION: Norland Conductive Adhesive 130 may cause skin irritation and prolonged contact with skin should be avoided. If contact occurs wash well with soap and water. Use in well ventilated area. Refer to the Material Safety Data Sheet for more information.

Store in a cool dark place (maximum temp 30° C). **CAUTION:** Do not freeze material. Never expose the bulk material to high heat or ultraviolet light. It can generate an extremely exothermic reaction.

The data contained in this technical data sheet is of a general nature and is based on laboratory test conditions. Norland Products does not warrant the data contained in this data sheet. Norland does not assume responsibility for test or performance results obtained by users. It is the users responsibility to determine the suitability for their product application, purposes and the suitability for use in the user's intended manufacturing apparatus and methods. The user should adopt such precautions and use guidelines as may be reasonably advisable or necessary for the protection of property and persons. Nothing in this technical data sheet shall act as a representation that the product use or application will not infringe a patent owned by someone other than Norland Products or act as a grant of a license under any Norland Products Inc patent. Norland Products recommends that each user test its proposed use and application before putting into production.