



APPLICATION BULLETIN

DaeCoat™ 550

UV Curable Water Washable Thermally Stable Protective Coating and Adhesive

DESCRIPTION: DaeCoat™ 550 is a 2-part (A and B) coating system designed for temporary protection of customer's device during high temperature processes and bonding of thin substrates for flat panel display manufacturing. The product is a reactive matrix that can be easily coated and removed by water after use.

APPLICATION: DaeCoat™ 550 achieves a hard, thermal resistant coating that has high adhesion on device layers for flat panel display, semiconductor, and other electronic device manufacturing. In particular, the coating offers rigidity, scratch and abrasion resistance, and is compatible with many device layers generally used. It is designed to apply on top of the electronic device to protect it from processes such as; laser dicing, transportation, primer for other coatings, support layer for thin substrates. When used as an adhesive, it is compatible with Laser Lift Off (LLO) method of debonding. Depending upon the substrate configuration, the coating may be applied by a range of methods, including spin, spray, or dip. Once applied, curing is achieved in seconds by ultraviolet (UV) light exposure. Options exist to customize the product for a specific application. Daetec can vary the material properties to achieve a desired thickness as met by existing manufacturing equipment.

PROPERTIES: DaeCoat™ 550 is a 100% solids system, designed to achieve smooth, uniform coatings that is free of blemishes. The formulation represents a low molecular weight reactive monomer that acts as a carrier for a complex package of ingredients, which react to exhibit hydrophilic properties. These materials perform synergistically together enabling superior properties beyond that exhibited individually.

PROCESS CONDITIONS:

CURE TYPE	COATING METHOD*	SOFT BAKE	HARD BAKE	EQUIPMENT	CLEAN
UV	Spin or Spray	UV**, <60sec	N/A	UV Source, Wet Bench	Deionized Water 60-70°C (<5min)

**UV condition varies w/ customer UV system

BOND TYPE	BONDING CONDITIONS	DEBOND CONDITIONS	CLEANING CONDITIONS	EQUIPMENT
Wet Bond, UV	25°C, < 1 min, < 1 PSI Vacuum Recommended	LLO	DaeClean™ 150 or DaeClean™ 250, <70°C, <15min	LLO, Wet Bench

QUALITY CONTROL: Thickness and roughness are the key interests with any coating application: Thickness and roughness of coating are to be confirmed by a range of equipment, including a drop gauge or profilometer (contact or optical). A chart may be used as a reference that relates thickness to the application (e.g. spin-speed curve). Contact Daetec for additional suggestions.

COMPATIBILITY: DaeCoat™ 550 is compatible to most metals, glass, ceramics, and related materials. When it is unknown about the working ability of a particular substrate and the coating, testing is recommended to confirm its safety. Contact Daetec in cases where extreme metal safety is needed. This product is not recommended with the following materials: *Polycarbonate and Acrylic*. When specifying the use of plastics in tooling and carriers, we recommend the use of the following: *Polypropylene and Poly Olefins, Polyethylene (low and high density), Teflon, and Butyl Rubber*.

TOXICITY: DaeCoat™ 550 contains monomers, which are toxic by inhalation. Always use the product in a fume hood or a well-ventilated area. Please see the product MSDS for further information.

PPE: Recommended personal protective equipment (PPE) includes eye glasses/goggles and gloves. Aprons may be used to protect clothing. Gloves made from nitrile or butyl rubber are recommended. Do not use gloves made from latex or vinyl.

STORAGE: DaeCoat™ 550 must be stored in a cool and dry environment and away from light and incompatibles. It should not be exposed to excessive temperatures or moisture. The recommended storage temperature is <30C, preferable near 20C.

DISPOSAL: Small spills may be collected with an appropriate paper towel or absorbent and managed by the normal practices as deemed by procedural policy. Although DaeCoat™ 550 is reactive, it loses this property during dilution. It may be comingled with other organics and managed by off-site fuels blending or recycled. No halogenated, reactive, or other EPA regulated substances exist.

AVAILABILITY: DaeCoat™ 550 is available in 1-kg bottles, 3.5-kg bottles, 20-kg pails and 100 kg drums.

QUESTIONS (?): Daetec has >30yrs experience in coatings, cleaning, high thermal resistance, temporary adhesives. Contact us!

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For More Information, please visit Water Wash Technologies - A Division of Daetec, LLC: www.waterwashtech.com
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