



APPLICATION BULLETIN

DaeCoat™ 515 Series

Water Washable Thermally Stable Protective Coating

DESCRIPTION: DaeCoat™ 515 Series is a coating system designed for temporary protection of a customer's device during laser processing, handling, or high temperature processes. The product is provided in a high viscosity form (DaeCoat™ 515-100) and subsequent lower viscosities (DaeCoat™ 515-40, 515-20). The products are designed to be coated, and removed by water after use.

APPLICATION: DaeCoat™ 515 Series achieves a hard and thermal resistant coating that has high adhesion on device layers for display, semiconductor, and other electronic device manufacturing. In particular, the products offer rigidity, scratch and abrasion resistance, and are compatible with many device layers. DaeCoat™ 515 Series is designed to apply on top of the electronic device to protect it from processes such as laser dicing, transportation, and a support layer for thin substrates. The coating will planarize over topography and provide a protective layer that spreads evenly over irregular surfaces. Depending upon the substrate configuration, the coating may be applied by a range of methods, including slit, spin, spray, or dip. Once applied, curing is achieved at low temperature in minutes. 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™ 515 Series is a multicomponent polymer system dissolved in a carrier liquid and is designed to achieve smooth coatings that are free of blemishes. Once fully cured, the product is thermal resistant to temperatures >350°C. Outgas values are much lower than most systems, achieving <1% up to 350°C. Please contact Daetec for more information.

PROCESS CONDITIONS:

The choice in processing DaeCoat™ 515 Series is dependent upon the application. The evaporative nature of spin coating encourages curing and as such, will minimize the need for heating.

APPLICATION	PRODUCT	METHOD	CURING*	CLEAN
Planarization Coating	DaeCoat™ 515-100	Spin	Hotplate, oven, 70-90°C, 5-10 min + 150°C, 5 min	DIW, RT Dip/Wash/Spray
Semiconductor Laser Debris Removal	DaeCoat™ 515-40, -20	Spin	Spin, ≥ 1000 rpm, ≤ 4 min	DIW, RT Dip/Wash/Spray
Display Handling & Protection	DaeCoat™ 515-40, -20	Slit or Spray	Hotplate, oven, 70-90°C, 5-10 min	DIW, RT Dip/Wash/Spray

*Application and viscosity dependent

QUALITY CONTROL: A COA for the liquid product is available upon request. Typical measured properties included viscosity, RI, pH, color, and surface tension. When measuring properties of the coating, 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™ 515 Series is compatible to most metals, glass, and ceramics. 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 stable with virtually all plastics. 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™ 515 Series is non-toxic and does not contain organic solvents.

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

STORAGE: DaeCoat™ 515 Series 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 <30°C, preferable near 20°C. Do not store in freezing conditions.

DISPOSAL: Small spills may be collected with an appropriate paper towel or absorbent and managed by the normal practices as deemed by procedural policy. The product may also be rinsed with water and sent to the sewer.

AVAILABILITY: DaeCoat™ 515 Series is available in 1-kg bottles, 3.5-kg bottles, 20-kg pails, and 100kg 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 www.waterwashtech.com - A Division of Daetec, LLC
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