

# DURA 500 THERMOPLASTIC FLAT ROOF COATING SYSTEM

## SPECIFICATION GUIDELINE FOR TAR & GRAVEL AND ROUGH SURFACE ROOF SYSTEM

### Part 1 – General Information

For the purpose of clarification in this document, the terms “Product” and “coating system” refer to Dura 500 Thermoplastic, Flat Roof Coating, the term “Manufacturer” refers to Dura Polymers, and the term “Contractor” refers to the applicator who installs the Product. The term “End User” shall refer to the person, persons or Corporation who owns the building on which the Product is being installed and/or the party who is purchasing the installation.

**CAUTION: Porous, rough, uneven, aged, and weathered substrates may require as much as 25% more material to achieve the minimum required dry film thickness of 30 mils listed in the guidelines below. We strongly recommend applying a test patch to determine your exact coverage rate per gallon.**

### 1.0 Scope

The Contractor shall provide all labour, materials and equipment necessary to complete the installation of the Dura 500 Thermoplastic coating system. The Manufacturer’s most current product data sheet and installation instructions shall be observed in conjunction with this specification. All conditions of this specification must be followed in order to obtain a valid Dura 500 - 15 Year Product Guarantee. Guarantees for all labour, workmanship, subcontractor services and subsequent inspection programs with regard to the application of the Product are the sole responsibility of the Contractor.

### 1.1 Submittals

- (a) The Contractor shall submit to the End User, Product Data sheets confirming physical and performance properties of the Product.
- (b) The Contractor shall submit to the End User, Material Safety Data Sheets for all products used in the installation.
- (c) The Contractor shall identify the End User and submit a roof survey to the Manufacturer and the End User, including roof measurements and detailed description of the condition of seams, penetrations, drains, gutters, and known leaks. The Contractor shall provide photographs of all the foregoing to the Manufacturer. The Contractor shall submit a roof moisture survey or test cuts with an indication of moisture content.

**IMPORTANT: For your own protection and the protection of the roof structure integrity, it is imperative that a roof moisture survey be completed, and areas of trapped moisture, wet insulation and existing leaks be corrected prior to washing or applying any coating to the**

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**roof. All wet insulation must be removed and replaced with new, dry material. Dura 500 is waterproof. If the coating is applied to a roof that contains moisture, the water will not be able to escape and could result in rot, mold formation, coating delamination, and possible catastrophic damage to the roof structure.**

### 1.2 Quality Assurance

- (a) The Manufacturer shall be the sole supplier of Product.
- (b) The Manufacturer shall maintain batch records of all Products supplied to the Contractor.
- (c) The Contractor must be an approved applicator of the Product.
- (d) Immediately after job completion, the Contractor shall submit a guarantee application accompanied by all the documentation as laid out in item 1.1 (c) above.
- (e) The Contractor shall provide all insurances, licenses, permits and certifications as required by local authorities and/or the End User.

### 1.3 General Conditions

- (a) The roof must be free of water, ice, snow, rain, dew, oils, grease, dirt, leaves and particulate matter, including loose ballast.
- (b) Roof insulation must be dry and/or vented in accordance with associated supplier's instructions. **IMPORTANT: For your own protection and the protection of the roof structure integrity, it is imperative that a roof moisture survey be completed, and areas of trapped moisture, wet insulation and existing leaks be corrected first, prior to washing or applying the coating system to the roof. All wet insulation must be removed and replaced with new, dry material. Dura 500 is waterproof. If the coating is applied to a roof that contains moisture, the water will not be able to escape and could result in rot, mold formation, coating delamination, and possible catastrophic damage to the roof structure.**
- (c) The roof surface must be a minimum of 36°F (2.2°C) at time of application to ensure that frozen condensation is not present on the roof surface. To avoid blistering and pinholes, do not apply the Product if roof temperatures exceed 100°F (37.7°C). Do not apply the Product if temperature is within 5 degrees of the dew point.
- (d) **IMPORTANT: Some yellowing or staining is relatively common with asphaltic surfaces on the first application of Dura 500. If this occurs, allow at least 36 hours before applying the second or subsequent coats. A test patch is recommended, allowing 36 hour cure time, followed by a second coat to see if yellowing has been eliminated.**

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### **1.4 Material Handling, Storage & Safety Considerations**

- (a) The Product should be stored at a temperature of 50°F (10°C) minimum for at least 24 hours prior to application to optimize flow and spread rate.
- (b) The Product should be mixed prior to application using a mechanical mixer to make sure it is fully homogenized. Solids in the Product can settle over time.
- (c) Consult material safety data sheets for all materials before using. Wear NIOSH approved respirator, nitrile gloves, and chemical safety glasses with side splash guards when working with coating or solvents.

### **Part 2 - Materials**

#### **2.0 Materials**

- (a) Good quality de-greaser detergent for use with pressure washers
- (b) Superior 450 Detailing & Seam Sealer, a thermoplastic brush and trowel grade coating
- (c) Superior 6.150 Spunlace Polyester Roof Fabric
- (d) Dura 500 Thermoplastic Flat Roof Coating
- (e) Tools & Equipment: Pressure washer capable of at least 2000 psi, ¾ to 1 ¼ nap rollers with 72" handles, 4" brushes, roofer's trowels, scissors for roof fabric, ½" power drill with mixing attachment, Graco 833 or similar, high pressure airless sprayer with ¾" hoses, 25' whip, mastic guns with .035 tip sizes with fan width of 12 to 14". In cold weather, you may require in-line heaters to raise Product temperature to a minimum of 70°F (21°C).
- (d) NIOSH approved respirator for solvents, rubber or nitrile gloves, chemical safety glasses with side splash guards

### **Part 3 – Execution**

#### **3.0 Inspection**

Before beginning work, the Contractor shall conduct a final inspection of the roof surface and report to the Manufacturer, any changes in the roof condition not reported in the original survey.

#### **3.1 Conditions & Remedies**

- (a) The roof assembly must be structurally sound and free of blisters, shrinkage, buckling, encapsulated moisture, delaminating of plies or other serious defects. Any serious defects shall

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be remedied prior to installation of the coating system. **IMPORTANT: For your own protection and the protection of the roof structure integrity, it is imperative that a roof moisture survey be completed, and areas of trapped moisture, wet insulation and existing leaks be corrected first, prior to washing or applying the coating system to the roof. All wet insulation must be removed and replaced with new, dry material. Dura 500 is waterproof. If the coating is applied to a roof that contains moisture, the water will not be able to escape and could result in rot, mold formation, coating delamination, and possible catastrophic damage to the roof structure.**

(b) Drains must be installed as to allow positive drainage of the roof surface. No areas shall retain water more than 48 hours or at depths exceeding 1/4 inch at any time. Retained water may not cover more than 5% of the roof's surface area. Corrections must be made in accordance with good roofing practices as per NRCA/CRCA guidelines.

(c) Fasteners shall be inspected for tenting or membrane damage. Replace as necessary according to original manufacturer or NRCA/CRCA guidelines.

(d) Curbs and penetrations must not interrupt the flow of water off of the roof. If defects are present install crickets to divert water around the penetrations.

(e) Insulation that is water-softened or water-soaked must be removed and replaced with the original or new compatible membrane installed.

(f) Flashings shall be properly terminated according to NRCA/CRCA guidelines. Defective terminations shall be remedied. Flashings that are shrunken, taught or tented shall be replaced prior to installation of the coating system.

### 3.2 Surface Preparation

**IMPORTANT: For your own protection and the protection of the roof structure integrity, it is imperative that a roof moisture survey be completed, and areas of trapped moisture, wet insulation and existing leaks be corrected first, prior to washing or applying the coating system to the roof. All wet insulation must be removed and replaced with new, dry material. Dura 500 is waterproof. If the coating is applied to a roof that contains moisture, the water will not be able to escape and could result in rot, mold formation, coating delamination, and possible catastrophic damage to the roof structure.**

(a) All loose ballast, stones, pea gravel, dirt and other debris must be removed from the roof surface. If you do not have the equipment necessary to accomplish this, there are commercial roof vacuuming services that can do this for you. Contact your Superior Polymers representative for further information.

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(b) The roof surface shall be cleaned with a good quality de-greaser/detergent and a pressure washer capable of at least 3000 psi. If required, agitate roof surface with stiff bristle broom or orbital scrubber.

(c) Rinse the roof surface with clean water and a minimum 3000 psi power washer until no detergent residue remains. Use caution to avoid saturating roof. Allow roof to dry completely prior to system installation.

(d) **IMPORTANT: Some yellowing or staining is relatively common with asphaltic surfaces on the first application of Dura 500. If this occurs, allow at least 36 hours before applying the second or subsequent coats.**

### 3.3 Seam & Flashing Reinforcement

(a) All seams shall be reinforced with Superior 6.150 Spunlace Polyester Roof Fabric. Apply Superior 450 Detailing & Seam Sealer at 1.5 gallons per 100 square feet and immediately embed fabric. Dry brush the fabric until smooth. Allow a minimum of 2 hours dry time. Apply an additional coat of Superior 450 on top of the fabric to fully encapsulate it. Allow 24 hours before top coating.

(b). All field defects, flashing defects or previous repairs must be reinforced with Superior 6.150 Spunlace Polyester Roof Fabric. Apply Superior 450 Detailing & Seam Sealer at 1.5 gallons per 100 square feet and immediately embed fabric. Dry brush the fabric until smooth. Allow a minimum of 2 hours dry time. Apply an additional coat Superior 450 on top of the fabric to fully encapsulate it. Allow 24 hours before top coating.

(c) Penetrations that cannot be sealed with reinforcing fabric due to their shape or location shall be reinforced with Superior 450 Detailing & Seam Sealer. Apply with a brush or trowel 1/8 inch thick to 1/4 inch thick and taper all edges. Allow 24 hours before top coating.

### 3.4 Coating Installation

**IMPORTANT: Extinguish all sources of ignition. Do not allow smoking on or near jobsite.**

(a). Remove any contamination or debris that has accumulated on the roof after cleaning.

(b) Apply a base coat of Dura 500 Thermoplastic Flat Roof Coating at the rate of 2.35 gallons per 100 square feet (50 wet mils). When spraying, use a multi-pass technique for even coverage. Protect unintended surfaces from overspray. Allow to dry 24 hours before applying top coat.

**NOTE: It is common for the first coat over asphalt to stain yellow or show dark discoloration. This condition is unpredictable and is often more evident when roof surface has been patched multiple times with tar based mastic products. If the first coat is allowed to cure for 36 to 48 hours, the second coat should cover this situation and cure pure white.**

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(c) Apply a finish coat of Dura 500 Thermoplastic Flat Roof Coating at the rate of 2.35 gallons per 100 square feet (50 wet mils). When spraying, use a multi-pass technique for even coverage. Protect unintended surfaces from overspray.

(d). All areas that retain any water must receive a third coat of Dura 500 Thermoplastic Roof Coating at the rate of 1.5 gallons per 100 square feet.

### **3.5 Inspection**

Inspect the roof for even and adequate coverage. Dry film thickness of the coating should be a minimum 30 mils. Areas of under-application shall receive an additional coat in order to meet the minimum film thickness requirements. Any fish mouths in reinforced areas shall be split, flattened and reinforced a second time.

### **Part 4 - Guarantees**

#### **15 Year Guarantee**

Dura 500 is guaranteed not to chalk, crack or peel for a period of 15 years from the date of application, provided that the roof preparation and coating instructions are completed in accordance with our Specification Guideline. Dura Polymers, accepts no responsibility for any applicators inability to detect and properly seal leaks. To ensure good adhesion and leak protection, proper cleaning, surface preparation and coating methods must be used, and these methods are the sole responsibility of the applicator. Applicators are responsible for all warranties pertaining to workmanship, surface preparation, structural roof repairs, installation of Dura 500, and any subsequent inspection and maintenance programs. Ponding water issues must be corrected in accordance with good roofing practices. If the coating does not perform as stated during the guarantee period, Dura Polymers will provide the original purchaser with replacement coating to repair the affected part of the coating. Failures due to acts of God, fire, structural defects, mechanical damage, intentional or accidental, are excluded from this guarantee. Dura Polymers is not responsible for any labor, property or other consequential damages or costs incurred in the original or any replacement application. Except as stated above, we make no warranties or guarantees, expressed or implied, and none should be inferred.