

# MonoThane II™ DATA SHEET

**MonoThane II™** is a water-borne, single-component, oxygen-cured, modified aliphatic polyurethane coating, possessing outstanding resistance to harsh environmental conditions, abrasion, impact, vibration, flexing and corrosion. **MonoThane II™** exhibits excellent adhesion to metals, PVC, concrete, wood, plastics, & other flexible or rigid materials. **MonoThane II™** is extremely resistant to the effects of U-V exposure, maintaining virtually original finish and, even after long-term weathering. **MonoThane II™** has proven flexibility and tolerance to expansion & contraction, providing a completely stable, non-cracking surface, desirable in harsh environments such as outdoor running track & gymnasium gamelines, warehouse flooring, shipboard & marine exposure, etc. **MonoThane II™** has excellent short-term resistance to alcohols, acids, alkalies, solvents, fuels, and temperatures to 275°F; and long-term resistance to hydraulic, lubricating & cutting oils, petro-chemicals, food stains, salts, paints, inks, asphalt, wet concrete, algae, pesticides, fertilizers, creosote, etc., and may be gloss-coated with water-borne **FloorKote-30™** for easy maintenance. **MonoTred II™** is a slip-resistant version of **MonoThane II™**.

## Product Selection

**MonoThane II™** is an ideal coating for warehouse flooring, gamelines for indoor gymnasium, outdoor running track, basketball and handball courts, etc. **Clear Gloss** will not yellow and will protect underlying colors from fading.

**MonoThane II™** exhibits excellent durability and high resistance to impact, cracking, chalking, yellowing, abrasion, normal wear & tear, and weathering in general. **MonoThane II™** has NO V.O.C.'s allowing indoor use during normal work or school schedules.

**MonoTred II™** is chemically "puckered", providing a light surface texture, which can improve traction under most wet conditions for sidewalks, locker room floors, shower areas, pool decks, transit bus floors, catwalks, fire escapes, vehicle running boards, kennels, and warehouse, garage or hangar floors, rampways, etc. **MonoTred II™** is available in tint only: NOT available as clear coat.

**TexShel®** natural aggregate can add superior slip-resistance to sloped surfaces, or where excessive water is generally present. Can be added to tinted and clear coats. See separate data sheet.

## Surface Preparation

**MonoThane II™** must be applied to a clean surface: no oil, grease, dust, powder, or any contaminants permissible. All rust and millscale must be removed. Metallic and concrete surfaces may require pressure washing or sandblasting followed by a water wash down. The surface may be damp before application of **MonoThane II™**. A water-based filler or sealer, such as **Hygra-Seal™** or **BarrierKote™**, may be used on concrete, brick, cinder block or wood prior to **MonoThane II™** topcoat application. 24-hours is recommended between primer and topcoat.

## Mixing

Settled pigment may require 5-minutes of medium speed impeller mixing to retain uniform color.

## General Application

Standard short-nap roller and brush are normally used to apply stock **MonoThane II™** as gameline or floor coating. Commercial "airless" spray equipment, with appropriate orifice for viscosity, may also be used with stock or slightly thinned **MonoThane II™**. "HVLP" or "conventional air" spray application will require significant water reduction to reach sprayable consistency: DFT per application will be greatly reduced. Thin with NO more than 10% water. A first coat may be spray-applied and then allowed to "tack" dry in approximately 20 minutes at 75°F. A final topcoat can then be spray-applied at a right angle to the first coat; or, a multi-directional, single "normal" coat of approximately 5- to 7-mil WFT may be applied, with caution, to guard against vertical "sagging"; heavier on horizontal surfaces.

## Curing

**MonoThane II™** is a state-of-the-art, water-based polyurethane system, which begins curing upon exposure to free oxygen in the atmosphere. High humidity can result in moderately increased cure time. Do not attempt to apply below 40°F or above 110°F. **MonoThane II™** must remain covered and tightly sealed when not open for use. Any un-used portion of **MonoThane II™** should be re-sealed in a smaller container to protect from atmospheric exposure. If ambient temperature is between 40°F to 65°F, an extended drying & cure time is required, and between 85°F to 110°F, a shorter drying & cure time will result. Do not unnecessarily expose opened **MonoThane II™** to air, as curing begins with surface evaporation.

## Gameline Application

Stock **MonoThane II™** may be roller-applied, or thinned sparingly with water to desired viscosity. Trial roll-apply **MonoThane II™** to taped test section of PVC-topped vinyl sheeting, or other flooring. Check gameline "color bleed" in floor texture pattern beneath tape of test section. To prevent color bleed, reduce water thinning, or clear-coat innertape edges with **MonoThane II™ Gloss, clear** prior to Roller-applying tinted **MonoThane II™** to desired WFT. Follow roller with soft paint brush to reduce or eliminate roller nap. Check WFT with gauge to achieve desired DFT. Please read separate **MonoThane II™ Gameline Application Guidelines**.

## Cleanup

Before **MonoThane II™** cures, tools and equipment may be cleaned with soap and water. Immediately wipe-up drips or excess **MonoThane II™** with water dampened cloth.

## Colors

**MonoThane II™** and **MonoTred II™** can be custom-matched to any color. Standard colors are white, black, Industrial gray, Safety red, Safety blue, Safety yellow, Safety green, and clear. Custom colors have a minimum order of 4-gallons.

## Packaging

**MonoThane II™** and **MonoTred II™** are supplied in full 1-quart & 1-gallon cans, 5-gallon pails, and 55-gallon drums. Other packaging options are available. Color must be specified at time of order.

## CAUTION

Do not store **MonoThane II™** or **MonoTred II™** at or below freezing temperatures.

## Physical Properties

<b>V.O.C.:</b>	<b>NONE</b>	<b>0 grams/liter (0 lbs/gal)</b>
<b>Gloss (ASTM D-523):</b>	<b>tinted: 55</b> <b>clear: 100</b>	
<b>Solid Content (by wt):</b>	<b>tinted: 65 - 70%</b> <b>clear: 45%</b>	
<b>Consistency:</b>	<b>Pourable, roller &amp; brush</b>	
<b>Coverages of tinted: (clear is approx. 2/3 of tinted)</b>		
<b>1-mil DFT (theoretical):</b>	<b>1,120 sq.ft./gallon</b>	
<b>4-mil DFT (6-mil WFT):</b>	<b>220 sq.ft./gallon</b>	
<b>8-mil DFT (11-mil WFT):</b>	<b>110 sq.ft./gallon</b>	
<b>10-mil DFT (14-mil WFT):</b>	<b>90 sq.ft./gallon</b>	
<b>"Tack" Time:</b>	<b>20-minutes at 75°F.</b>	
<b>"Tack-Free" Time:</b>	<b>45-minutes at 75°F.</b>	
<b>"Stack" Time:</b>	<b>24-hours at 75°F.</b>	
<b>"Cure" Time:</b>	<b>72-hours at 75°F.</b>	
<b>Adhesion:</b>	<b>Excellent on: metals,</b> <b>concrete, masonry, etc.</b>	
<b>Hardness:</b>	<b>50 Shore "B" after 7 days</b> <b>4H: pencil (ASTM D-2134)</b>	
<b>Tensile strength:</b>	<b>6,000 p.s.i. (ASTM D-412)</b>	
<b>Elongation:</b>	<b>100% (ASTM D-412)</b>	
<b>Impact resistance:</b>	<b>180 inch-pounds</b>	
<b>Flexibility:</b>	<b>Excellent: 8-mil DFT =</b> <b>180° bend over 1/8" mandrel.</b> <b>No chip, peel or cracking.</b>	
<b>Taber Abrasion:</b>	<b>CS10 wheel at 1-kg pressure.</b> <b>Film loss: 30-mgm/1200 cycles.</b>	
<b>Salt spray:</b>	<b>No lifting or film deterioration</b> <b>after 100-hours at 95°F with 5%</b> <b>salt solution, on scribed and</b> <b>unscribed steel panels.</b>	
<b>Weather resistance:</b>	<b>Excellent: No discoloration,</b> <b>oxidation, yellowing or</b> <b>blistering after 1,000-hours in</b> <b>QUV Weatherometer.</b>	

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