



Bondathane™

Multi-Surface Urethane Adhesive Compound

PRODUCT OVERVIEW

Bondathane™ is a low-odor liquid urethane adhesive compound that will penetrate and permanently bond porous surfaces such as ceramics, cement, stone, plaster and wood. **Bondathane™** components are easily mixed in equal amounts (1A:1B) by volume and feature an initial low viscosity so that the mixture will flow into cracks and other narrow spaces.

Bondathane™ has a 5 – 8 minute working time depending on mass. Handling strength is in 2 – 4 hours depending on mass. Bond is extremely strong and wear resistant. Fully cured **Bondathane™** can be machined, sanded, primed, painted or stained.

Bondathane™ is especially suited for woodworking / repair applications such as furniture restoration, structural wood repair, filling of screw holes, etc. Once the repair is made, you can sand cured material and paint or use a wood stain to match existing surfaces.

Important; Proper surface preparation is crucial for a successful bond. See “Surface Preparation” directions below.

TECHNICAL OVERVIEW

Key Values: ~*Mixing Ratio:* 1A to 1B by volume (100A:40B by weight) ~*Durometer:* Shore 72D

	<u>Pot Life</u>	<u>Color</u>	<u>Handling Strength</u>	<u>Full Cure</u>
Bondathane™	5 minutes	Off-White	2-4 hours at room temp.	24 hours
COMPONENTS	COLOR	VISCOSITY	S.V. cu. In./lb.	
Mixed Part A + B	Off-White	15,000 cps	26	
Shore D Hardness: 72	Ultimate Tensile Strength*: 1,975 psi		Lap Shear*: 3,170 psi	
*values measured after 7 days at 77°F / 23°C				

Surface Preparation

Preparing To Mix

Measuring

Surface Preparation For Bonding – for best results, surfaces to be bonded should be dry and free of dust, oils or other contaminants. When possible, lightly abrade surfaces with sand paper or steel wool that will come in contact with **Bondathane™**. Remove residue and wipe surfaces with solvent (such as acetone). Allow solvent to evaporate before applying. If repairing rotted wood, remove all loose and decayed material before applying **Bondathane™**. When filling a large gap, you can create a dam structure around the repair area to contain **Bondathane™** as it changes from liquid to solid using modeling clay or duct tape.

Preparing to mix and apply – Store and use liquid urethanes at room temperature (72°F / 22°C). Liquid urethane products have a limited shelf life and should be used as soon as possible. Liquid urethanes are **moisture sensitive** and will absorb atmospheric moisture. Mixing tools and containers should be clean and made of metal or plastic. Mixing should be done in a well-ventilated area. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

Measuring

Mixing

Applying

Curing

Performance

Measuring – The mix ratio of **Bondathane™** is 1A:1B by volume. The components of **Bondathane™** require three containers. The first two will be of equal size and are used for measuring equal amounts of Part A and Part B. The third container should be large enough to accommodate both components and allow thorough mixing.

Warning; components will separate during storage. Before each use, PRE-MIX both Part A & Part B thoroughly in their individual containers by stirring with a clean paint paddle. Measure equal amounts of Part A and B by volume and combine into a larger mixing container. **Helpful Hint . . . Don't Waste Material** - Only use an amount that you can mix and apply in 5 minutes. This material is mass sensitive and generates its own heat to cure. Larger amounts in a concentrated mass will have a shorter working time.

Mixing – Mix thoroughly for at least 3 minutes. Stir deliberately making sure that you scrape the sides and bottom of the mixing container several times. Be careful not to splash low viscosity material out of mixing container.

Applying – Do not delay between mixing and applying. Apply uniformly with disposable brush or spatula over prepared surface. **Bondathane™** will adhere to itself if additional layers are needed. Apply new material to existing material within 4 hours of existing material setting up.

Curing – **Warning:** Fumes, which may be visible as this product starts to “gel” and cure, will dissipate with adequate ventilation. Only use this product with room size ventilation and do not inhale/breathe fumes.

Warning; Material will be extremely hot immediately following cure and may burn the skin. Let cool to room temperature before handling.

Bondathane™ will develop handling strength in about 2 – 4 hours at room temperature (77°F / 23°C) depending on mass. Full strength will develop in 24 hours at room temperature depending on mass. Cure time can be reduced by applying mild heat (150°F / 60°C). Let cool before handling. At this point, it is stable enough to sand, prime, and paint or stain. If sanding or machining, wear dust mask or cartridge filter mask to prevent dust inhalation.

Performance – Cured **Bondathane™** is rigid and will resist moisture, moderate heat, solvents, dilute acids and can be machined, primed/painted or drilled. If sanding cured **Bondathane™**, wear dust mask or other apparatus to prevent inhalation of residual particles. **Bondathane™** should be primed and painted if used for an outdoor application. Because no two applications are quite the same, a small test application to determine suitability is recommended if performance of this material is in question.

Safety First!

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The material safety data sheet (MSDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully.

Be careful. Part A (Yellow Label) contains methylene diphenyldiisocyanate. Vapors, which can be significant if pre-polymer is heated or sprayed, may cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe irritation. Flush eyes with water for 15 minutes and get immediate medical attention. Remove from skin with soap and water. Part B (Blue Label) is irritating to the eyes and skin. Avoid prolonged or repeated skin contact. If contaminated, flush eyes with water for 15 minutes and get immediate medical attention. Remove from skin with soap and water. When mixing with Part A, follow precautions for handling isocyanates. If machining cured **Bondathane™**, wear dust mask or other apparatus to prevent dust inhalation.

Call Us Anytime With Questions About Your Application

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