

Adiabatics, Inc.

We Make More Possible!

Adiaccoat

“The Elastic Coating for Your Elastic Needs”

Coating Application Guide

Adiaccoat hybrid polyurea elastomer coatings have been designed for easy application using simple equipment available from Adiabatics, Inc. Our coatings are custom blended for application by:

- Brushing – 100% deposit efficiency
- Casting – 100% deposit efficiency
- LP Spraying – 80% deposit efficiency

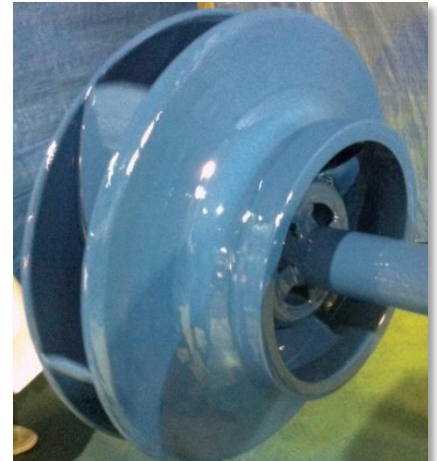
The application methods use standard coating procedures requiring 3 basic steps:

1. Surface Preparation
2. Primer Application
3. Coating Application

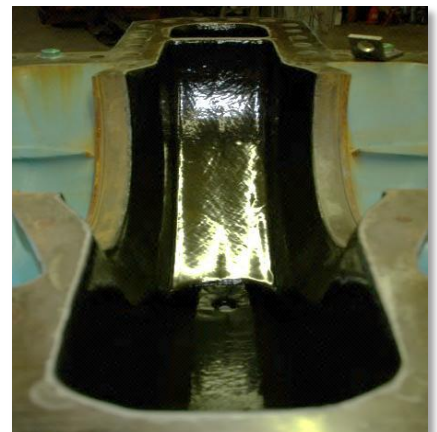
These steps are outlined in this guide. Additional instruction is available by contacting Adiabatics, Inc. or one of our representatives.



Water pump damage from cavitation and erosion can be prevented or repaired using Adiaccoat Elastomer.



Impeller repaired in the field using Adiaccoat Elastomer



A water pump housing coated using our Adiaccoat Elastomer

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1. Surface Preparation

In order for Adiaccoat to work properly, it is critical that the soon-to-be coated surface is properly prepared. For **maximum adhesion**, use on **metallic surfaces**. However, Adiaccoat is still capable of adhering to plastic, rubber, FRP, polyurethane, concrete, and wood.

There are **four important steps** one must follow to help ensure Adiaccoat's best results:

1. **Grit Blasting** – grit blast surface in accordance to the NACE-1/SSPC-SP-5 surface preparation standard (White Metal Blast Surface) using aluminum oxide grit with particle size between 1.0 and 2.0 mm
2. **Air Cleaning** – apply pressurized **dry air** (moisture causes blistering) to the entire surface to remove all loose contaminants
3. **Degreasing** – using paper towels and **acetone**, wipe the surface in order to remove all moisture, oil, and chemical substances
4. **Air Cleaning** – apply pressurized **dry air** to the surface to remove paper towel remnants caused by degreasing

IMPORTANT NOTES:

- If using on **rubber / polyurethane**, roughen vigorously with an abrasive tool, such as a grinding disc, carbide-tipped tool, or wire wheel, in order to ensure a well-prepared surface
- **Sharp edges** must be **rounded** in order to ensure a thick enough layer of coating

****The more time and effort one spends on preparing a surface, the better the adhesion**



Grit Blasting – preferred method for cleaning and roughing the surface to be coated



Acetone Wipe – used for final degreasing of surface to be coated

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2. Priming

Adiabatics, Inc. has developed two revolutionary primers for its Adiacoat elastomer, each with its own unique advantages:

1) **AdiaPrime Blue**

- **Primer must be heated**
- **Achieves Ultimate Bond-strength for use in severe cavitation and areas of heavy particulate impingement.**
- **Mix with a ratio of 1:1**

Directions for Use:

Shake both components well before using. Mix Part A to Part B with a volume ratio of 1:1. Then, by either brushing or low-pressure spraying, apply one thin layer of primer over all areas to be coated.

2) **AdiaPrime Red**

- **No heating of object necessary**
- **Superior bond-strength**
- **Mix with a ratio of 1:1:1 (Part A to Part B to Solvent)**

Directions for Use:

Shake both components well before using. Mix Part A to Part B to Acetone with a volume ratio of 1:1:1. Then, by either brushing or low-pressure spraying, apply one thin layer of primer over all areas to be coated. Let object sit for at least 40 minutes (no more than 2 hours) before applying Adiacoat.

IMPORTANT NOTES:

- **DO NOT apply more than one coat of primer to the object**
- **DO NOT touch primer**
- **Make sure all to-be-coated areas are covered with primer**



Priming can be done simply by brushing or rolling as shown above.



For very large area applications or in cases as shown above (hard to reach areas), HVLP spraying of primer can be used

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3. Coating Application

Coating of Adiacoat elastomers is as easy as 1-2-3:

1. Apply coating by brushing

For specific geometries and areas where ventilation may be an issue, Adiacoat can be brushed on. Adiabatics has developed specialized brushing equipment that will enable rapid brushing of coating followed by easy clean up. Our equipment can be both disposed of and replaced with new brushes or the special brushes can be cleaned and reused. This is environmentally friendly.

2. Apply coating by spraying technique

Conventional safe, low pressure spray applicators are available for small to medium coating jobs. Adiabatics also has developed customized high volume application equipment to safely and economically apply our coatings to large surface area jobs. Spray atomizing air must be clean and dry.

3. Apply coating by casting

For the most demanding applications, Adiacoat elastomers can be tailored to apply by casting technique. This method results in 100% deposit efficiency of coating in thicknesses up to 5mm. This is most effective for applications where uniform thickness is important and large volumes of like hardware is being coated.

IMPORTANT NOTE:

Coating will air cure and can be put into service after 5 days. Oven cure at 100°C will cure coating in 8 hours.



For both small and large jobs, Adiacoat Elastomer Coating can be applied by low pressure spraying.



Cement chute coated using casting technique enables repeated coating with uniform coating thickness and improved surface finish