

# Stone Setting in Epoxy

APPLICATION MANUAL

PRECIOSA

# Contents

**4 | INTRODUCTION**

**5 | PRODUCT OVERVIEW**

**6 | REQUIRED EQUIPMENT**

**7 | EPOXY PREPARATION**

**10 | PROPER STONE SETTING**

**11 | APPLICATION INTO A SETTING**

**12 | TROUBLESHOOTING**

**13 | MAINTENANCE INSTRUCTIONS**



# Introduction

The epoxy is a two-part synthetic putty which is classed as a thermosetting polymer. By combining two chemical ingredients (resin and hardener), a chemical reaction is started which creates a malleable substance. The epoxy is used not only in fashion jewelry, but also in a wide range of decorative applications. After processing, the epoxy hardens on its own. Its advantages include stability of shape, durability, and adhesion to a wide variety of surfaces.



# Product Overview



**Round Stones**



**Fancy Stones**



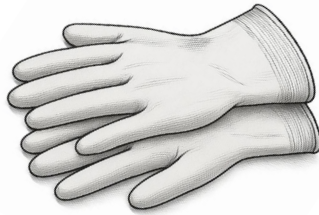
**Flatback Stones**

# Required Equipment

## TOOLS AND EQUIPMENT



Two-part epoxy



Gloves



Scales



Tool for picking up  
and setting stones

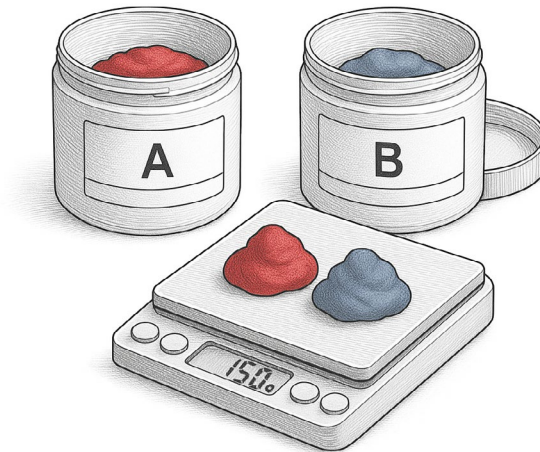


Isopropyl alcohol



Cotton swabs

# Epoxy Preparation



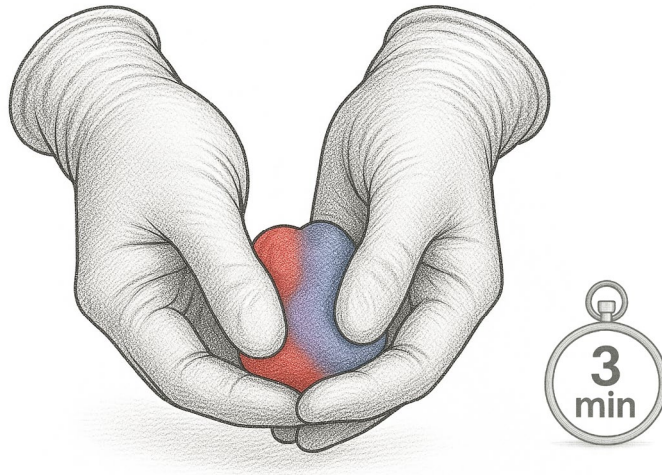
## Mixing the Epoxy

The epoxy is created by mixing two soft, malleable ingredients – resin and hardener. Both ingredients are mixed at a specific ratio. Most commonly **1:1**. The ratio of both ingredients must not be altered and the epoxy manufacturer's instructions must always be followed. To ensure the specified ratio is observed, it is recommended to use digital scales to weigh the resin and the hardener.

If too much resin is used, the epoxy may be too plastic and may not harden enough. As a result, the stones may fall out.

If too much hardener is used, the resulting epoxy may be too fragile. There is a risk of the epoxy cracking and the stones falling out.

## PREPARING THE EPOXY



### Kneading

Before combining the two epoxy ingredients, it is recommended to first **warm up both ingredients in the hand**. The ingredients will combine better afterwards. The minimum kneading time is **3 minutes**. The resulting substance must be perfectly homogeneous. If the two epoxy ingredients are not mixed properly, the quality of the resulting product may be poor. The stones may not be fixed firmly in the final product.

The epoxy must always be plastic before use. The epoxy is to be stored and used at room temperature and low humidity. The epoxy must not freeze or be used after expiration.

The epoxy is a universal material with good adhesion to all clean surfaces. There is no need to choose an epoxy based on the specific underlying material.

The color of the epoxy cannot be changed by adjusting the ratio of the two ingredients. The ratio prescribed by the manufacturer must be observed. If a different color epoxy is required, the epoxy manufacturer must be contacted directly or an epoxy chosen with the correct color by default.

When working with the epoxy, it is recommended to use protective gloves.

### Processability

There is a limit to how long the epoxy can be processed. It always depends on the epoxy used. The processability period may be in the order of tens of minutes to several hours. After this time, the epoxy will begin to harden. Always follow the manufacturer's instructions and do not exceed the specified processability period.

Before applying the epoxy, make sure the underlying material is sufficiently clean. It must be free of dust, grease, or other pollutants. To clean the surface, isopropyl alcohol may be applied using a cotton swab.

### Hardening

Once work is finished, the epoxy must be left to harden for **24 hours** at room temperature. The hardening time can be reduced by increasing the temperature. The epoxy hardens faster at higher temperatures. Always follow the manufacturer's recommendations.

Do not handle the final product during hardening. To prevent dust and dirt settling, for example, the final product may be covered with a lid.

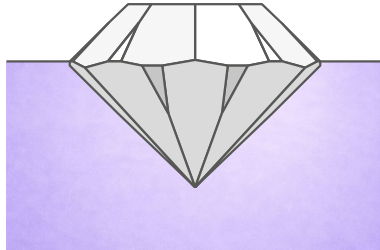
### Tool Cleaning

All tools (scales, the tool for picking up and setting stones, mat, etc.) must be thoroughly cleaned after use so that no epoxy residue remains. Surfaces can be cleaned using isopropyl alcohol.

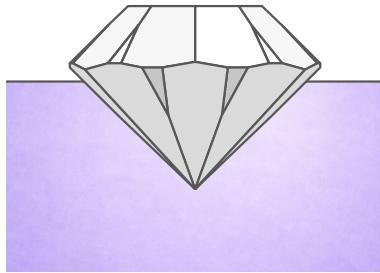
### Methods of Using the Epoxy

- **Separately**
- **Wrapping an object**
- **Application into a setting** (see the instruction manual, page 10)

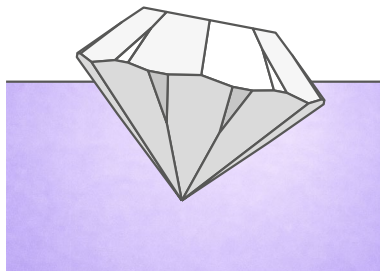
# Proper Stone Setting



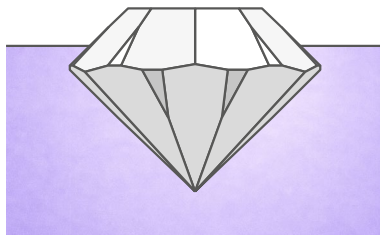
Proper positioning and setting depth of the stone in the epoxy (embedding up to the girdle of the stone)



Stone not embedded enough

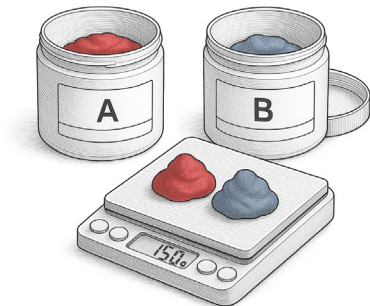


Stone askew

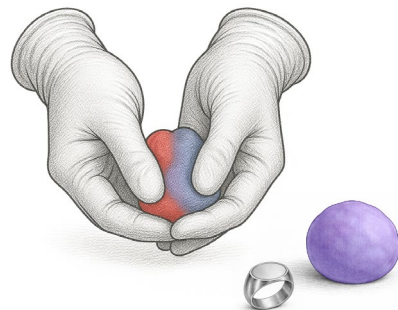


Stone too deep

# Application into a Setting



Take out the necessary amount of resin (A) and hardener (B) at the ratio stated by the epoxy manufacturer. To ensure accuracy, weigh both parts on a digital scale.



Mix both ingredients thoroughly until a homogeneous, malleable substance forms.



Press the epoxy into the prepared metal setting and shape it as required. The surface of the metal setting must be clear of grease, dust, and other pollutants.



Set the stones into the prepared setting. For perfect fixation and flawless appearance, the stones must be pressed into the epoxy up to the girdle.



The epoxy can only be processed for a limited time. Follow the manufacturer's instructions and do not exceed the processability period. Do not handle the finished product afterward, and let the epoxy harden at room temperature for at least 24 hours.



Once the epoxy has hardened, clean the product with a soft cloth or a cotton swab with a small amount of isopropyl alcohol. Epoxy products should not come into contact with water, perfumes, and other liquids.

# Troubleshooting

ISSUE	RECOMMENDATIONS
<p>The <b>stones fall out</b> after the epoxy has hardened.</p>	<p>Make sure to observe the <b>exact ratio of both ingredients</b> as stated by the epoxy manufacturer.</p> <p>Make sure the <b>epoxy has been thoroughly mixed</b> to create a homogeneous substance.</p> <p>If the epoxy <b>processability period has been exceeded</b>, mix a new epoxy.</p> <p>Make sure the <b>underlying material is clear of all pollutants, dust, and grease</b>.</p> <p>Make sure the <b>stones are set correctly</b> (up to the girdle).</p> <p>The <b>epoxy is not hardened enough</b>. Follow the manufacturer's instructions.</p>
<p>The <b>epoxy does not adhere</b> to the underlying material.</p>	<p>Make sure the <b>underlying material is clear of all pollutants, dust, and grease</b>.</p> <p>Make sure to observe the <b>exact ratio of both ingredients</b> as stated by the epoxy manufacturer.</p> <p>Make sure the <b>epoxy has been thoroughly mixed</b> to create a homogeneous substance.</p> <p>If the epoxy <b>processability period has been exceeded</b>, mix a new epoxy.</p> <p><b>The underlying material is not suitable</b> for the application of epoxy (e.g. silicone, Teflon, etc.).</p>
<p>The set <b>stones lose their optical/aesthetic properties</b>.</p>	<p>The stones have most likely been <b>stained</b> by the epoxy. Clean the final product, hardened at room temperature, with a soft cloth or a cotton swab. If necessary, clean using <b>isopropyl alcohol</b>. Make sure the underlying material is clear of all pollutants, dust, and grease.</p>
<p>The <b>stones are not set deep enough</b>.</p>	<p><b>Push the stones deeper</b> into the epoxy. Up to the girdle.</p>
<p>The stones are set <b>too deep</b>.</p>	<p>Carefully remove the stones from the epoxy and set them again. The stones should be pushed in <b>up to the girdle and no deeper</b>.</p>

# Maintenance Instructions

	ROUND STONES	FANCY STONES	FLATBACK STONES
 <p>Turn inside out, choose a gentle wash cycle, and use a mild laundry detergent. To protect the stones as much as possible, the use of a soft wash bag is recommended.</p>			
 <p>Turn inside out, choose a gentle wash cycle, and use a mild laundry detergent. To protect the stones as much as possible, the use of a soft wash bag is recommended.</p>			
 <p>Wash by hand. Turn inside out and use a mild laundry detergent.</p>			
 <p>Do not wash.</p>	●	●	●
 <p>Do not use chlorine bleach!</p>	●	●	●
 <p>Turn inside out and dry at a reduced temperature.</p>			
 <p>Do not tumble dry!</p>	●	●	●
 <p>Iron inside out using a silk/polyester/viscose setting. The use of a pressing cloth is recommended during ironing.</p>			
 <p>Iron inside out using a wool setting.</p>			
 <p>Do not iron! Do not iron directly over the stones.</p>	●	●	●
 <p>May be gently dry-cleaned using perchlorethylene. Turn inside out.</p>			
 <p>May be gently dry-cleaned using hydrocarbon.</p>			
 <p>The material can be gently dry-cleaned with water. Turn inside out.</p>			
 <p>Do not dry-clean the material.</p>	●	●	●

## **Preciosa Components**

A Member of the Preciosa Group

A global leader in luxury goods manufactured from crystal, the Preciosa Group stands upon centuries of glassmaking tradition and innovation. From the world's smallest faceted flatback stone to our cutting-edge, bespoke lighting installations, we at Preciosa look to our own unique heritage to draw inspiration for the future of responsibly crafted Bohemian crystal. Together, the Group operates regional offices across Europe, North America, and Asia, and melts 40 tons of glass every day.

[www.preciosacomponents.com](http://www.preciosacomponents.com)