

No Shrink Pink® Jewelry Molding Rubber Shrinkage Rates As Low As 0.0%

Version **2.0**

PLEASE NOTE: This jewelry molding rubber compound will give excellent results if used as directed. Users will need to experiment with different times, temperatures and procedures to establish the technique that works best with their equipment. See note below.

Castaldo® No Shrink Pink® Jewelry Molding Rubber is a natural rubber product, just like Castaldo White Label and Gold Label Jewelry Molding Rubber. It can be used in combination with those standard compounds, or by itself.

Everything about Castaldo No Shrink Pink Jewelry Molding Rubber is designed to be either compatible with White Label® and Gold Label® Jewelry Molding Rubber or as similar as possible. Handling, procedures, etc. are identical with those commonly used for White Label and Gold Label Jewelry Molding Rubber **except that special attention must be paid to accurate vulcanizing temperatures. DO NOT TRUST THE DIALS ON YOUR VULCANIZER THEY ARE OFTEN WILDLY INACCURATE.** Use an accurate glass or metal thermometer and make sure that your vulcanizer is really performing as expected before attempting to use this rubber.



Remember to check both top and bottom plates of your vulcanizer separately. The easiest way to do this is to put a block of scrap wood in your vulcanizer and measure first between the wood and the top plate and then between the wood and the bottom plate.

Observations should be made over an extended period of time in order to watch the vulcanizer through its heating and cooling cycles. Some machines heat and cool in narrow ranges; other experience wide swings. The results should be noted for future reference.

If the two plates are very different in temperature, the only choice may be to take the mold out of the press half way through the process and turn it over in an attempt to equalize temperature exposure.

Recommended vulcanizing time and temperatures are **different** from regular White Label and Gold Label Jewelry Molding Rubber.

We recommend that you **BEGIN** at an **actually measured** maximum temperature of:

310° F / 154°C for 7 1/2 Minutes Per Layer

Remember that the temperature you are trying to measure and use to set your vulcanizer is the **HIGHEST** temperature the rubber will experience. This means that you should set the vulcanizer so that the **hottest plate** at the **hottest time**



of its cycle is at 310°F /154°C. Then make a mold under these conditions and note the results.

Adjusting temperature

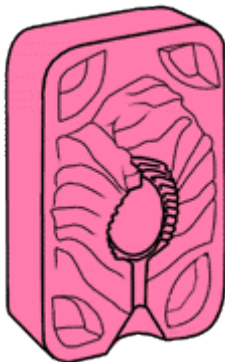
If shrinkage persists, **INCREASE** vulcanizing temperature by 2° - 3° at a time until the desired results are achieved. **Actually measured** temperatures of up to 350°F / 177°C may be required but should be used with caution. Some bubbles and discoloration is normal at these temperatures.

If unusual and undesirable results are obtained, such as soft and sticky rubber, large voids, pin holes, severe bubbles etc., **REDUCE** vulcanizing temperature by 2° - 3° at a time until the problem disappears.

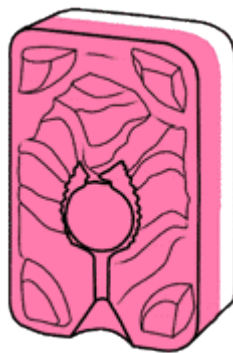
Curling / wrapping

If a mold made with new Castaldo No Shrink Pink® shows excessive curling, two solutions are possible:

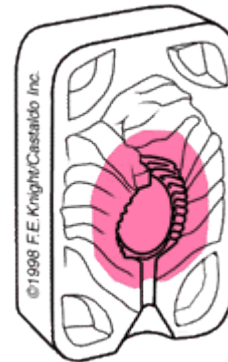
1. Place a weight (such as a book) on the mold for a few hours or overnight. This solves the curling problem permanently.
2. Make a sandwich mold using No Shrink Pink in the center (next to the model) and either regular White Label or Gold Label as the top and bottom layers. This avoids the problem entirely and is also more economical. The same time and temperature above should be used for vulcanizing all 3 types of molds when using this method.



Mold Made of 100%
No Shrink Pink



"Sandwich" Mold Made of
No Shrink Pink and White
Label or
Gold Label



"Center-Only" Mold Made
of No Shrink Pink Rubber
and White Label
or Gold Label

Some advice based on experience

Temperature variations from top plate to bottom plate or even from left side to right side are commonly as much as 20° to 50°F / 5° to 10°C. The up and down swings between heating and cooling cycles are often as much as well.

With our White Label and Gold Label compounds this does not matter - with our No Shrink Pink it is critical.

It is highly unlikely that your first test mold will show reduced shrinkage. But it is only a beginning. Once again - set your vulcanizer by the hottest temperature observed, increase the temperature 1° or 2° and make another mold, note the results, etc. Somewhere - probably 10° or 15°F / 3° - 5°C above 310°F / 154°C - shrinkage will begin to drop and eventually reach 0.0%. **Note these conditions and make them your standard procedure.**



It should be obvious that there are a wide variety of other factors involved in jewelry casting shrinkage including the diameter and length of the sprue, the type and temperature of the wax, injection pressure, holding time, etc. Your experiments will be worthless if you do not keep these factors constant as well.

Our experience with this compound has been that some casters use it successfully almost the very first time. More than 75% learn how to use it after a period of learning and experimentation and are then very enthusiastic about it. The remainder give up early and never obtain this compound's benefits for lack of the proper technique or the ability to learn it.

The dyes used in Castaldo No Shrink Pink Jewelry Molding Rubber change color as temperature increases and can act as a convenient problem-solving guide.

PLEASE READ THIS CAREFULLY!

This product will produce wax patterns with shrinkage rates as low as 0.0%. **But it will not do so automatically** because of the many variables beyond our control that exist in the mold making, wax injection and metal casting processes.

Users who take the time to follow directions carefully, calibrate their equipment and experiment will be rewarded with wax patterns showing shrinkage rates below 1.0% and even as low as 0.0%

Using Color as a Diagnostic Tool

<i>Color</i>	<i>Meaning</i>
<i>Hot Raspberry Pink</i>	<i>Vulcanizer Too Cold</i>
<i>Medium Pink / Typical Eraser Pink</i>	<i>Okay</i>
<i>Tan Color Outside</i>	<i>Vulcanizer Too Hot</i>
<i>Tan Color Inside</i>	<i>Vulcanizer Much Too Hot</i>

Problem Solving Chart

Problem	Cause	Solution
<i>Shrinkage</i>	<i>Vulcanizer not hot enough</i>	<i>Increase temperature by small steps</i>

<i>Small bubbles, pin holes inside mold</i>	<i>Vulcanizer too hot</i>	<i>Reduce temperature by small steps</i>
<i>Large bubbles on outside of mold; sticky surface</i>	<i>Vulcanizer much too hot</i>	<i>Check temperature with thermometer; reduce temperature</i>
<i>One side only: Large bubbles on outside of mold; sticky surface</i>	<i>One vulcanizer plate much too hot</i>	<i>Check temperature with thermometer; repair vulcanizer; turn mold over halfway through process</i>
<i>Mold curls, warps, will not lie flat</i>		<i>Make "sandwich" mold with White Label; place mold under weight overnight</i>

Note: The use of mold frame with "relief holes" drilled in them may not be advisable. Users should experiment to determine the suitability of such frames.

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