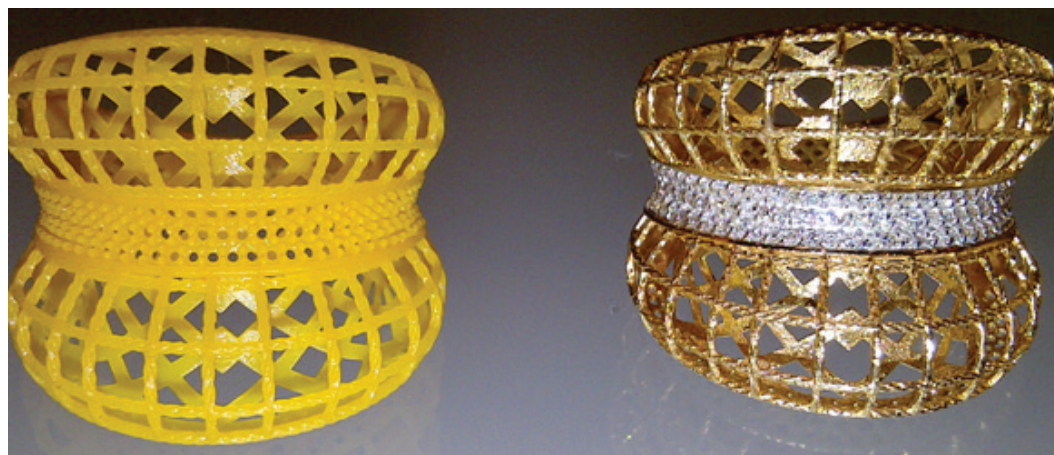


# White Paper

## Preparation and manufacture of stone in place castings using PIC100 /EC500

by Dinurje and Sarto Pvt India

This white paper will set out the procedures needed to successfully manufacture "Stone in Place" castings using a PIC100/EC500 resin mixture and an EnvisionTEC Perfactory 3D printer.



### EnvisionTEC GmbH

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

### EnvisionTEC, Inc.

15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

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

[info@envisiontec.com](mailto:info@envisiontec.com)

EnvisionTEC GMBH do not take any responsibility for the data reproduced here and if you have any further questions please refer Sarto Pvt India.

© EnvisionTEC, All rights reserved.

No part of this may be reproduced, stored in a retrieval system or transmitted in any form, or by no means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of the publisher.

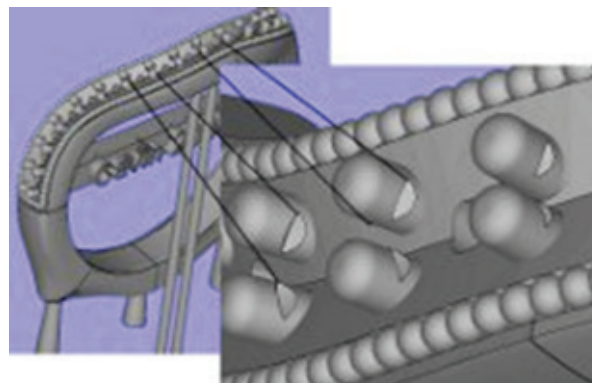


## Stone in place casting

Page 1

Stage one, parts must be prepared in the 3D CAD with "pre-cuts" on the stone settings in order to grip the stone sufficiently during the casting process.

Convert to stl file format as normal using .1mm resolution adding supports and casting sprues ideally 4mm in diameter.



Prepare job file and send to either Perfactory® Mini, Aureus or Micro. These machines tend to give the best accuracy and surface finish.

Mix 75% PIC100 and 25% EC500 resin and use PIC100 buildstyle.

Perfactory® Micro



Perfactory® Mini



Perfactory® Aureus



### EnvisionTEC GmbH

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

### EnvisionTEC USA

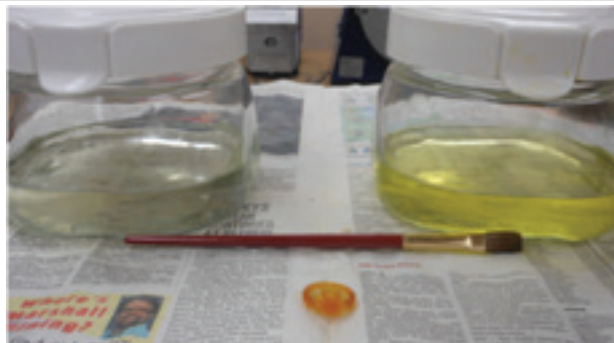
15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

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

## Stone in place casting

Page 2

After growing the model and removing from the printer, clean the jobs thoroughly insuring there are no wet areas.



Using a soft brush and alcohol will quickly clean the jobs. Be sure to remove all uncured resin as that will negatively effect the casting process.



Gently blow air on the jobs to fully dry the alcohol.



After cleaning, place the jobs in the curing unit. Use 6500 cycles 4 times. Be sure to flip the jobs after each curing cycle to insure complete curing of the parts.



### EnvisionTEC GmbH

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

### EnvisionTEC USA

15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

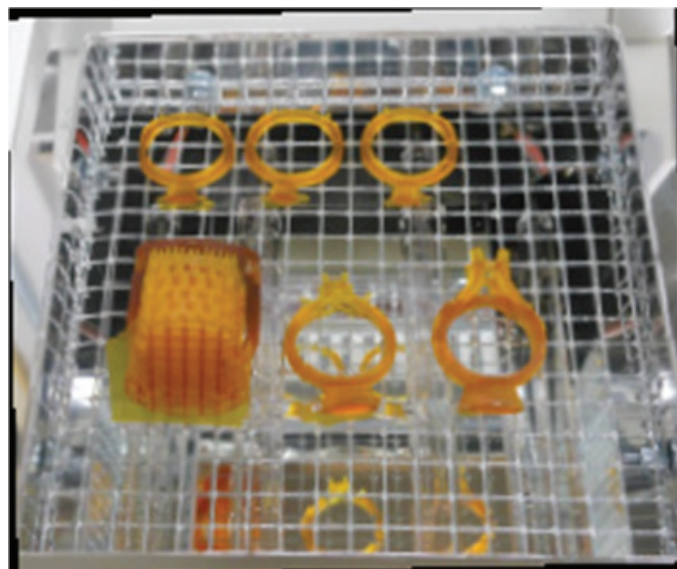
[www.envisiontec.com](http://www.envisiontec.com)



## Stone in place casting

Page 3

Evenly space the jobs in the curing unit to insure all sides receive the light.

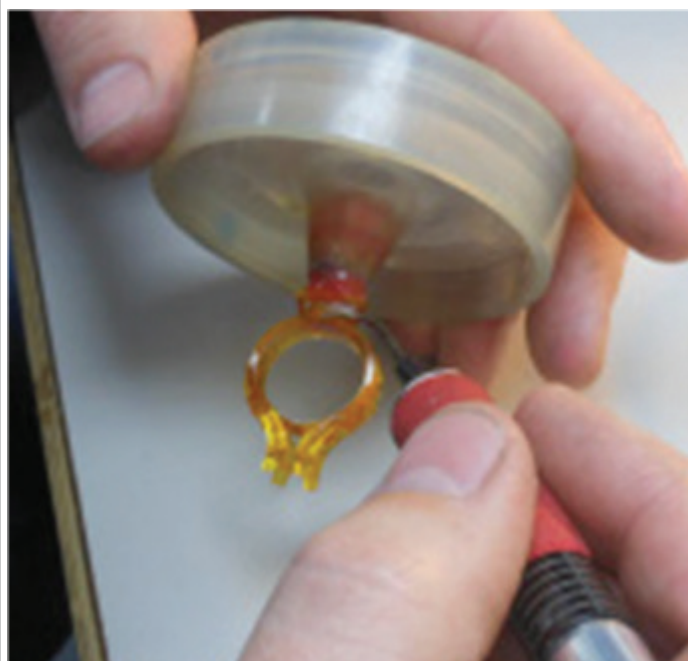


Press fit diamonds into pre-cuts.



Make wax investment tree in normal way.

Avoid sharp angles, space evenly, and use 4mm diameter sprue.



## EnvisionTEC GmbH

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

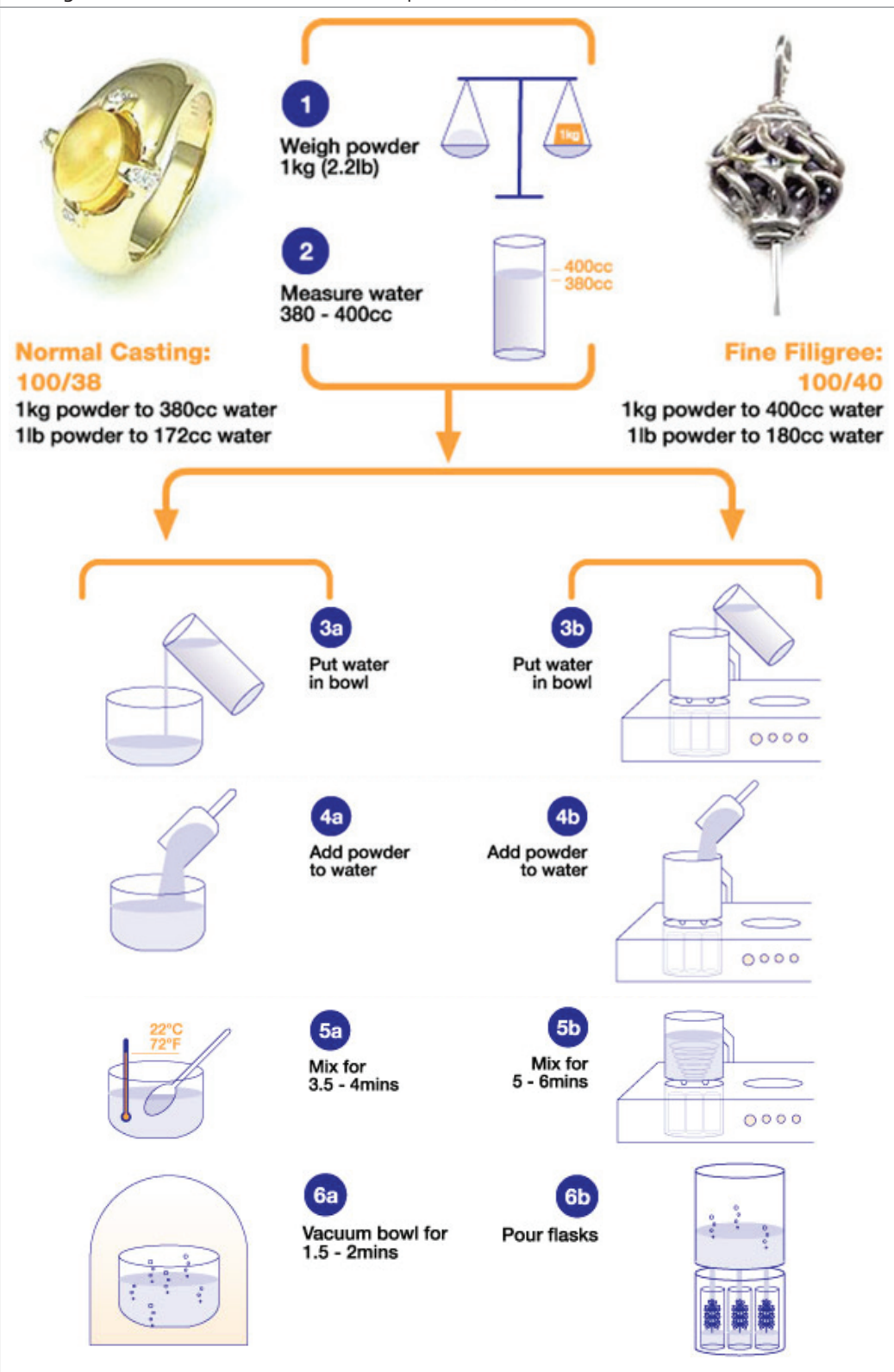
## EnvisionTEC USA

15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

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



Mixing instructions for SRS Stone cast powder (A)



EnvisionTEC GmbH

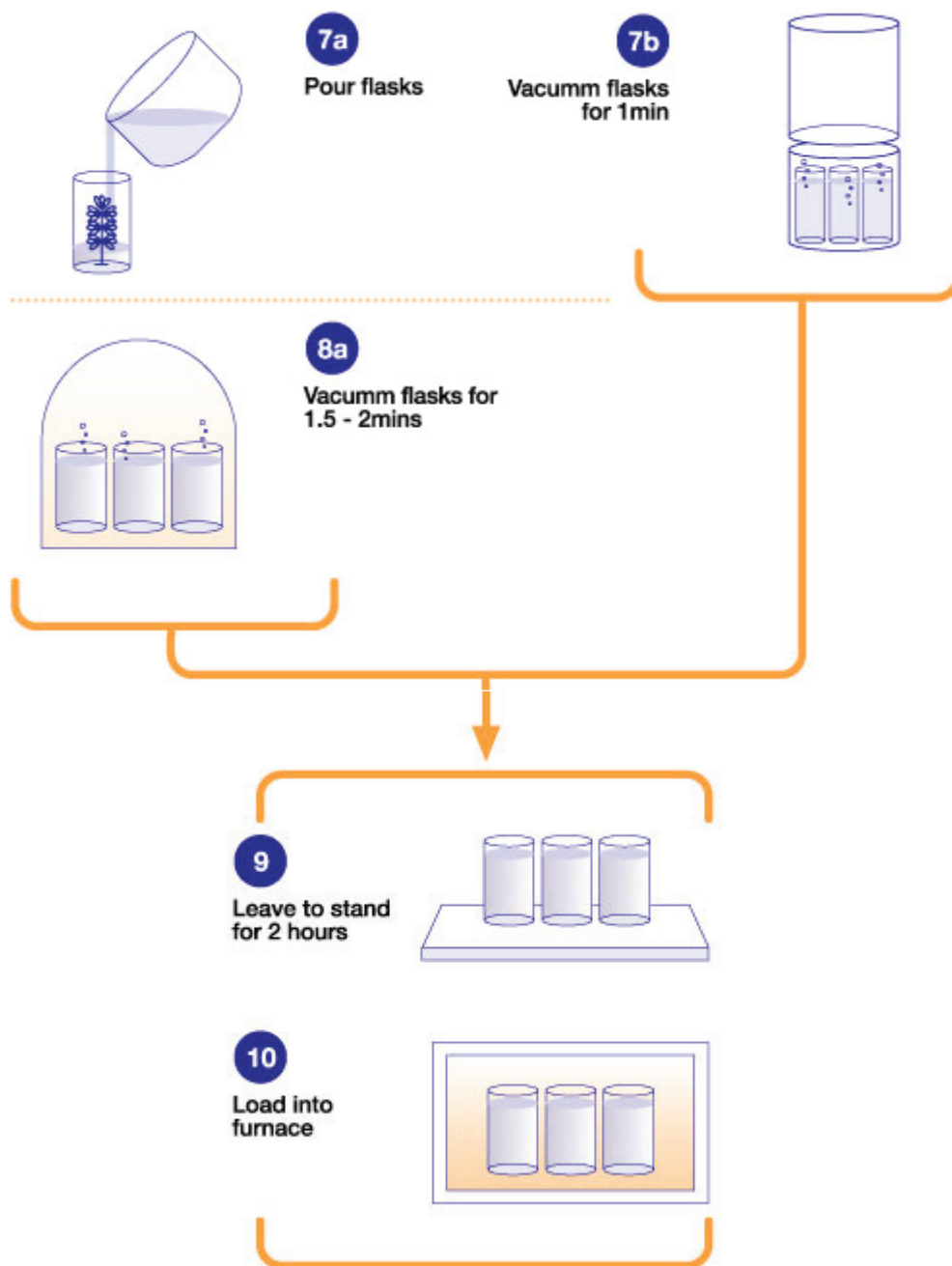
Brüsseler Straße 51 D-45968  
 Gladbeck • Germany  
 Phone +49 2043 9875-0  
 Fax +49 2043 9875-99

EnvisionTEC USA

15162 S. Commerce Dr  
 Dearborn, MI 48120 • USA  
 Phone +1-313-436-4300  
 Fax +1-313-436-4303

www.envisiontec.com

Mixing instructions for SRS Stone cast powder (B)



**EnvisionTEC GmbH**

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

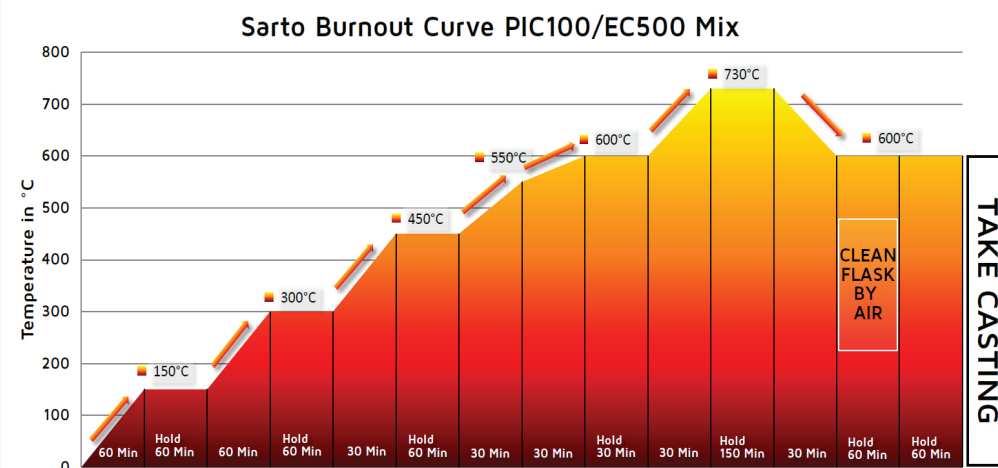
**EnvisionTEC USA**

15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

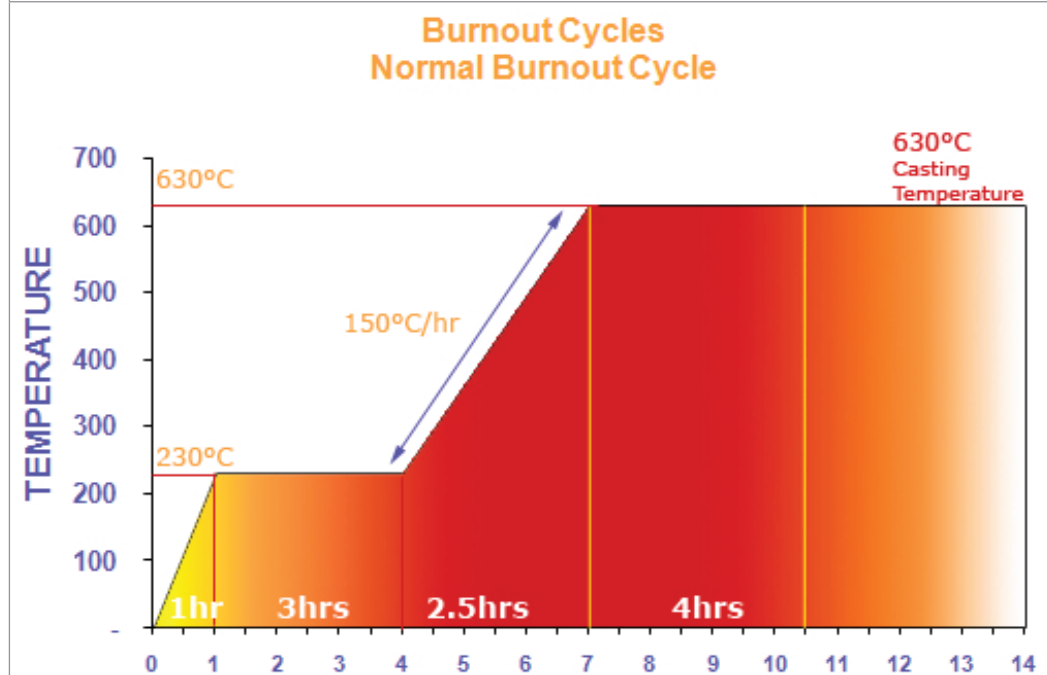
[www.envisiontec.com](http://www.envisiontec.com)



Sarto's suggested burnout curve



SRS's suggested burnout curve for Stonecast investment powder



### EnvisionTEC GmbH

Brüsseler Straße 51 D-45968  
Gladbeck • Germany  
Phone +49 2043 9875-0  
Fax +49 2043 9875-99

### EnvisionTEC USA

15162 S. Commerce Dr  
Dearborn, MI 48120 • USA  
Phone +1-313-436-4300  
Fax +1-313-436-4303

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

Further information for the use of SRS investment powders can be found on following website: [www.goldstarpowders.com](http://www.goldstarpowders.com)

For more information on Sarto's way of "stone in place" casting, please contact Mr. Rohil Mehta via [rohil@sartolectro.com](mailto:rohil@sartolectro.com)

For further information on using EnvisionTEC's equipment and resins please contact [info@envisiontec.com](mailto:info@envisiontec.com)