

# DRUNK TURTLE CONCRETE WITHOUT EPOXY PREPARATION PROTOCOL



## IMPORTANT:

1. Use the spray ball in the attachment photos located at the end of protocol or a similar one for preparing the opus
2. Use low pressure for cleaning the opus. Do not let water or solution hit opus wall at pressures above 2 BARS or 35 PSI
3. Never use water hotter than 37 C or 100 F for cleaning the opus and when you do use hot water, increase the temperature steadily over time
4. Do not use steam
5. Never use a high-pressure washing jet
6. Do not go above 10% regarding tartaric acid solution
7. Remove opus up from palette by inserting forklift channels in between the opus's feet
8. Metal disks that come with opus can be placed underneath each foot
9. When rinsing opus with tartaric acid solution, keep outside of opus wrapped with shrink-wrap prevent cosmetic damages

## Concrete opus without epoxy preparation for use:

- 1.) Using neutral water at a PH of 7 (or very close to 7) and at room temperature do the following:
  - a. Rinse the opus with at least 10% or more of the opus's total volume using a spray ball and recycling system for at least two hours as shown in the photo.
  - b. **IMPORTANT:** Make the pump operate at a low pressure so the spray ball is only gently showering the sides of the opus like in the attachments.

Table regarding 10% Amounts

Opus Type	Actual Capacity (L)	10% Amount (L)	10% Amount (G)
3.5	375	38	10
10	1052	105	28
17	1800	180	48
25	2700	270	71

Or

c. Fill the opus up entirely with water and let it sit for a minimum of two hours or overnight.

d. Drain the opus. It might be possible that the color of the water is slightly opaque because of some dust that is on the inside of the surface of the concrete from when the doors and accessories were installed.

2.) Next, in a separate metal or plastic bucket pour the following amount (depends on the size of the opus) of neutral water at room temperature that has a PH of 7 or close to 7 and create a 5% tartaric acid solution. Mix the tartaric acid into the water until it is fully dissolved. Then transfer the solution from the bucket into the opus using a pump set at a low pressure and a spray ball like in the attachments.

Opus Type	Actual Capacity (L)	10% Amount (L)	10% Amount (G)	5% Tartaric Acid Amount (Kg)
3.5	375	38	10	1.9
10	1052	105	28	5.25
17	1800	180	48	9
25	2700	270	71	13.5

3.) Circulate the tartaric acid solution in the opus using a spray ball with a recycling system for **three hours** and close the lid. Set the pump at a low pressure. It is important that the spray ball is secured around  $\frac{3}{4}$ 's of the opus's height like in the attachments in order to ensure the solution is getting sprayed evenly throughout the opus. Open lid and check inside of Opus periodically.

**4.)** Drain and discard the tartaric acid solution from the opus and open all doors and valves to let the opus air-dry. When you drain and discard the solution, the water might be an opaque color and there will be tartrates at the bottom of the Opus. This is normal because the tartaric acid is reacting and neutralizing the concrete.

**5.)** Let the opus air dry for a minimum of 6 hours or an entire day before next treatment. Do not rinse with water in between treatments. Small crystal tartrates may form on the inside of the opus that you can see if you rub your hand on the opus's inside.

**6.)** After waiting for the opus to be completely dry, prepare a 10% tartaric acid solution in a separate plastic or metal bucket with neutral water at room temperature and repeat the same procedure as that effectuated with the 5% tartaric acid solution.

<b>Opus Type</b>	<b>Actual Capacity (L)</b>	<b>10% Amount (L)</b>	<b>10% Amount (G)</b>	<b>10% Tartaric Acid Amount (Kg)</b>
3.5	375	38	10	3.8
10	1052	105	28	10.5
17	1800	180	48	18
25	2700	270	71	27

**7.)** Drain and discard the tartaric acid solution from the opus and open all doors and valves to let the opus air-dry. When you drain and discard the solution, the water might be an opaque color. This is normal because the tartaric acid is reacting and neutralizing the concrete.

**8.)** Let the opus air-dry. Small crystal tartrates may form on the inside of the opus that you can see if you rub your hand on it. The opus is now fit for putting wine inside. You can either put the wine directly inside or you can briefly rinse it with neutral water at a PH of 7.

**9.)** If you would like to add more tartaric acid to the concrete, you can apply another 10% tartaric acid solution by brushing or spraying the interior of the Opus with a hand pump.

### **Concrete opus without epoxy cleaning protocol after use:**

**1.** Rinse opus with hot water under 37 C or 100 F at the lowest possible pressure. If you are going to use hot water, increase the temperature of the water over time. Do not start off with very hot water.

**2.** If your winery does not have hot water, you can use room temperature water. You can also do the same water rinsing recycling system mentioned in Step 1.

**3.** If the walls of the opus are still dirty and contain tartrate crystals, you can proceed with a 1.5% soda ash or Sodium Carbonate solution for cleaning the opus. Prepare the soda ash solution in a 10% solution of the opus's total volume in a separate bucket like the tartaric acid solution preparation in step **2** and then circulate it inside of the opus.

Opus Type	Actual Capacity (L)	10% Amount (L)	10% Amount (G)	1.5% Sodium Carbonate Solution (Kg)
3.5	375	38	10	0.57
10	1052	105	28	1.575
17	1800	180	48	2.7
25	2700	270	71	4.05

**4.** Because you have used a base to clean the opus, before putting wine back in it, you will need to prepare the opus again for use with a tartaric acid solution.

*\* If the opus is left with no wine inside of it for more than 3 months, you should prepare it again for use with a tartaric acid solution.*

# DRUNK TURTLE PROTOCOL PHOTOS



Use a spray ball similar to the one above that sprays evenly and can operate at low pressures. Create a recycling system with two hoses and a pump set at a low pressure.

When you operate the pump at a low pressures, the spray ball will spray the sides of the opus like a gentle fountain. Also notice how the spray ball is located at almost  $\frac{3}{4}$  of the opus's height to ensure even spraying and distribution.

