



# Standard Operating Procedure Homemade Play Dough for Leak Testing the Vapor Pin® Sampling Device with the Water Dam

Updated February 2, 2021

## Scope:

This standard operating procedure describes the making of Homemade Play Dough for leak testing the VAPOR PIN® sampling device with the water dam.

## Purpose:

The purpose of this procedure is to provide VOC-free play dough to assure good quality control in field operations and uniformity between field personnel while performing leak detection of the VAPOR PIN® sampling device with the water dam.

## Equipment Needed:

- 1/2 cup cornstarch,
- 1 cup baking soda
- 3/4 cup water
- Parchment Paper
- Pan
- Stove

## Assembly Procedure:

- In a saucepan with NO heat, add the cornstarch, baking soda, water and stir;
- Place your saucepan on the stove top and turn your heat to medium;
- Continue stirring the mix constantly.
- It will start to bubble slightly and that's when it happens fast, it will begin to turn solid.

- Once a ball starts to form (4-5 minutes) take pan off the heat.
- Place dough onto a piece of parchment paper or a silicone mat.
- Let cool, it will be VERY hot.
- To speed the cooling process, flip it over and knead it a bit as it's cooling down. *Be careful, it's HOT.*
- Once dough is cool, you will be able to form playdough (Figure 2).



Figure 2. Play Dough

## Installation Procedure:

- 1) Roll a 1-inch diameter ball of Play Dough between your palms to form a "snake" approximately 7 inches long and press it against the end of the water dam. Push the water dam gently against the slab to form a seal with the concrete.
- 2) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an alternative can be the water dam and vacuum pump, as described in SOP Leak Testing the

VAPOR PIN® sampling device protected under US Patent # 8,220,347 B2 and other US and International Patents

VAPOR PIN® sampling device via Mechanical Means (Figure 3). For flush-mount installations, distilled water can be poured directly into the 1 1/2 inch (38mm) hole.



Figure 3. Water dam used for leak detection

- 3) Attach the sample tubing to the top of the VAPOR PIN® sampling device and pour enough distilled water into the water dam to immerse base of the VAPOR PIN® sampling device , and if desired, the tubing connection at the top of the VAPOR PIN® sampling device .
- 4) Purge the sample point as required by the data quality objectives. Concrete will absorb some of the water, which is normal; however, if water is lost to the sub-slab, stop, remove the water from the couple, and reposition the VAPOR PIN® sampling device to stop the leakage. Reseat the leak test equipment, if needed.
- 5) If the VAPOR PIN® sampling device is installed in the flush-mount configuration, the larger hole can be filled with water in place of the water dam and Play-Dough or modeling clay.