

## EXTRUSION STARTUP

### RECOMMENDED PROCEDURE FOR VI-CHEM CORPORATION PRODUCTS

The following recommendations are made to help insure a safe, productive profile extruder startup using Vi-Chem Corporation Compounds. Before you start any extrusion line, know the safety limits of your machine and materials with respect to amperage, pressure, and temperature.

1. The machine and die should be empty and clean. Pull the screw to make sure that the right screw is in the machine and that it is clean. Inspect behind the mixing pins and in the mixing sections for material hang-up.
2. The machine hopper should be free of material during the machine heat up.
3. Fill and start the preheaters and hopper dryers.
4. All mating and sealing surfaces (breaker plate) should be clean and true to prevent leaks, sites for hang-up, or dead spots. Once PVC stops moving through the process equipment, it will burn. No amount of heat stabilizer can stabilize a PVC compound from burning at a dead spot.
5. Set the startup conditions based on your product-processing standard. Set the die temperature 10°F lower than the required standard temperature. Do not turn on the screw temperature control yet.
6. Pay close attention to the amount of machine heat up time. Too much soak time can cause black specks in the finished product, and too little soak time can result in a hazardous cold start condition. Allow for a 30-minute soak after reaching barrel and die set temperatures.
7. Attach the die, breaker plate, and screens. Make sure to alternate the tightening of die bolts. The die, breaker plate, and adapter must sit square and true to avoid leaks.
8. As the machine comes up to the set temperature and while the machine is soaking:
  - a. Check for an unrestricted flow of water through the feed throat block, lubricating oil cooling circuit, and barrel cooling circuit.
  - b. Clean the vent ports, sight glasses, and filters on the barrel zone cooling blowers if necessary.
  - c. Check that the heater bands are tight, that the thermocouples are bottomed out, that the heater bands and thermocouples are plugged into the proper receptacles, that the temperature controllers are functioning properly, and that the pressure transducer is connected correctly.

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