

PROCESSING GUIDE FOR EXTRUSION OF RIGID PVC DRYBLEND

EQUIPMENT & CONDITIONS	SUGGESTIONS						
Compound Drying	Not required						
Color Concentrate Type	PVC-based color concentrates						
Machine Type	Conical or Parallel twin screw with vacuum venting						
Screw Design	The screws must be designed to process Rigid PVC						
Barrel Type	Bi-Metallic recommended						
Breaker Plate	Not required						
Screen Packs	Not required						
Screw Cooling/Heating	Temperature controlled oil filled screws recommended Water filled screws can be used but may have a tighter process window.						
Die Design	Flat plate dies are not suggested Streamlined low inventory design is preferred Construction materials should be 420 stainless or hard chrome plating						
Machine Temperatures	<table border="1"> <thead> <tr> <th>Barrel Temperatures</th> <th>Die Temperatures</th> <th>Melt Temperatures</th> </tr> </thead> <tbody> <tr> <td>325 - 365°F</td> <td>345 - 365°F</td> <td>370 - 390°F</td> </tr> </tbody> </table> <p>**Melt temperature should be measured using a hand held pyrometer</p>	Barrel Temperatures	Die Temperatures	Melt Temperatures	325 - 365°F	345 - 365°F	370 - 390°F
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Downstream Options	Cutting can be done with saws, guillotines or fly knives. Vacuum sizing, spray tank or air rack sizing is acceptable.						
Purging	Use a PVC purging compound						
Regrind	Recyclable; mix up to 20% regrind with virgin						
Additional Considerations	Die care is extremely important. At the conclusion of a production run, the die and all associated components should be neutralized to remove any residual hydrochloric acid and then treated with a high quality mold preservative/rust inhibitor.						

EQUIPMENT & CONDITIONS

SUGGESTIONS

Start-up Procedures

Once the extruder has reached operating temperatures, slowly rotate the screws. Increase the speed of the screws until the normal running speed is reached. Run until the melt is smooth. Stop the screws and assemble the preheated die as quickly as possible. Restart the screws at a low RPM until the melt exits the die. Slowly increase the RPM until the desired speed is reached, monitoring the load at all times. String the material through the downstream equipment.

Shut-down Procedures

Once the PVC has been removed from the feed throat, a purge compound should be introduced and run through the extruder. After the purge compound is the only thing exiting the die (no residual PVC) the extruder can be stopped and the die assembly can be removed for cleaning and storage. The screws should then be restarted and run at a low speed until all of the purging compound is removed from the screws and barrel.

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