

Notes and Tips

Changing from high temperature materials to lower

It is important to realise that when purging, molten material is always easier to remove than solid. For this reason when changing to a lower temperature polymer you should always purge the higher temperature material at the higher temperature first with Barrel Blitz Universal (BBU). If the higher temperature polymers processing temperature is above 340°C (644°F) reduce the barrel temperatures to 340°C (644°F) and then purge with BBU. You should then empty the barrel completely and reduce heats to the processing temperature of the lower following material. Then purge again with BBU at the lower temperature to clear any “sticky” BBU and ensure the equipment is fully clean.

First time use in machine which processes high temperature materials

The main issue with this scenario is that there is likely to be residue of the high temperature material remaining in the equipment. For this reason, on the first occasion – assuming you will be using the BBU to change from all high heat materials in the future:

- Purge at the current temperature – using the instructions – until clean
- Empty the screw COMPLETELY
- Increase the temperatures to the processing temperatures of the high temperature material
- Reduce heats back down to 340°C (644°F) if hotter
- Purge with BBU – using the instructions – until clean
- Empty the screw COMPLETELY
- Reduce heats to the next material
- Purge with BBU again to remove any “sticky” BBU and EMPTY the screw COMPLETELY

Causes of poor cleaning performance

Degraded material in the feed section of the screw

BBU is a mechanical cleaning purging compound, for this reason it will not clean the feed section of screws and barrels very effectively. The state of your feed section can be checked by looking down a cleaned hopper throat whilst doing suck back or decompression of the screw. To the full back position.

Worn screw or barrel

This is likely to have various effects on the moulding process; increased shear heat, increased screw back time, increased degradation and slower cycle time. It will also affect the performance of BBU which will no longer be self-emptying and may require additional quantity to clean due to poor compression (leakage) in the worn section.

Large nozzle orifice or mismatched endcap and screw tip geometry

As mentioned above, BBU cleans mechanically therefore a large nozzle or mismatch of the angles between the endcap and screw tip effectively reduces compression. This results in poor scrubbing efficiency. Also BBU then becomes more difficult to remove on certain materials such as PC, ABS, Amorphous Nylon etc.




Screw not emptied completely

This can happen if the BBU has been purged above 260°C (500°F). Having a polyolefin based carrier the PP % becomes very sticky above 260°C (500°F) and does not allow the screw to self-empty. After purging at the higher temperature reduce the temperatures to 220°C (428°F) and allow to stabilise. Purge with a small quantity to BBU 100 grams per 100 tonnes and the screw will now empty completely.

Screw throat gelation (Melting)

BBU is a coarse powder with a polyolefin base, it will therefore melt quicker than standard polyolefin granules. For this reason, only put BBU into the hopper throat WHEN you are going to purge.

All further details from the company.
Unit 2, Argent Trade Park, Pump Lane, Hayes, Middlesex UB3 3NB. UK.

 +44 (0) 20 8813 7990  +44 (0) 20 8848 8404  enquiries@aquapurge.com

www.aquapurge.com