d2w® Purge

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"Designed to Clean d2w"

d2w Purge

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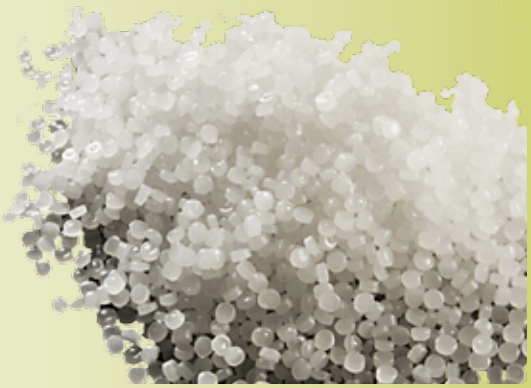

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Product Description

Symphony Environmental Technologies has specially formulated an improved gentle cleansing agent, d_2w Purge, to be used with their d_2w range of Controlled-life additives. d_2w Purge is a mechanical purging agent which can be used to easily clean and remove traces of degradable polymer formulations from extrusion equipment ensuring clean and efficient change-over from degradable to conventional polymers, as well as for normal purging requirements. Moreover it allows safe shut down/start up, preventing gel and black spec build up that could lead to problems with processing. As this material is not as abrasive or intrusive as full-scale purge; the clean down period is minimised. Within a very short time Controlled-life additive will be safely purged out. It is not necessary to spend excessive, wasteful production time clearing out conventional purge.

When to purge?

You need to purge your equipment on a regular basis, especially when:

- Material changes from oxo-degradable to conventional products
- Black specking appears
- For routine maintenance
- For preventive maintenance
- After machine shutdown

d_2w Purge Features and benefits

- **Minimize Downtime and Reduce Scrap:** No strip-down of processing equipment is required. d_2w Purge cleans on the first pass - minimizing machine downtime to maximize your productivity.
- **Support a Safe Work Environment:** d_2w Purge ingredients are completely non-toxic and suitable for use in the manufacture of food-contact products.
- **Easy to Use:** d_2w Purge is packaged ready to use. There is no mixing or waiting necessary, so there are no hidden costs. Moreover, it is permissible to leave the barrel full of purge before start-up.
- **Efficiency:** d_2w Purge enables easy removal and subsequent cleaning of equipment.
- **Versatile Application:** d_2w Purge can be used for many applications. It is suitable for use in blown and cast film applications, including coextrusion.
- **Compatibility:** d_2w Purge is available in LDPE and HDPE variants.

2 main reasons of using d_2w Purge with Controlled-life additive?

d_2w Purge is recommended to be used to ensure that there is no cross contamination between oxo-biodegradable and conventional films. The purging compound allows the converter to effectively remove oxo-degradable materials from the equipment prior to switch over and thus allows control over the quality process.

Controlled-life additives if not handled properly can cause degradation during start up and shut down procedures- both planned and unforeseen. This is because the process can be run slowly during these steps or it can soak at high temperatures during warm up or cool down. Similarly a problem could be encountered in the production machinery and a controlled shut down could not be possible. These situations can lead to degradation because material is "cooking" at high temperatures breaking down generating gels, black specs and other melt contaminants which lead to production losses because of poor quality product and down time to rectify the problems. Purging the extruder prior to shut down to remove the Controlled-life Plastic significantly reduces the potential for this to happen. Similarly using d_2w Purge can help salvage the process following a machine problem.

How does it work?

You need to follow 2 procedures when changing from degradable to non-degradable production:

Stage A
"Equipment Shut Down Procedure in 10 steps"
To remove Controlled-life additive

Given the nature of the Controlled-life additive it is desirable to remove all traces of polymer from the extruder prior to shut down.

1- Reduce the extruder barrel temperature to 180-200°C

2- Reduce extruder output and shut off the flow of resin to the hopper

3- Continue to run the extruder to clear material from the barrel. Monitor system pressure and screw torque

4- Empty and thoroughly clean the extruder-hopper of any residual degradable material

5- Introduce d_2w Purge into the hopper

6- Continue to purge the machine at low screw-speed until the barrel is clean. Purging temperatures should be between 180-200°C but adjust as necessary to ensure that safe motor torque or pressures are not exceeded

7- Continue to monitor extruder-die pressure and torque during the purging step. This should take about 20 minutes to achieve. Ensure that torque-motor current levels do not exceed the safe values for the machine

8- When the purging compound exiting the die appears clean and consistent it is safe to switch off the machine or continue processing non-degradable material. This process will typically take 20 minutes

9- Empty any remaining purge from the hopper if it has not run empty

10-When screw current motor load has reduced, stop screw and switch off extruder

Stage B
"Start Up Process in 3 steps"
To remove d_2w Purge

When starting up the extruder after a purged shut down it is important that all the purge material is eliminated from the system. This can generally be achieved by pushing out any purging residue with the base film resin.

1- Set temperatures to between 180-200°C and begin to introduce the base polymer

2- Monitor extrusion conditions, particularly screw speed, torque or motor current and ensure that they are within safe values for the machine

3- When the die runs clear with the desired base polymer, optimise the extrusion conditions to achieve the desired product requirement

Symphony Environmental
"World-leaders in advanced plastic technology"

Symphony environmental

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