

TEKNOCLEAN PURGING EMULSION FOR PLASTICS PROCESSING MACHINES

- *For effective fast and cheap purging during color and material changes
- *TEKNOCLEAN gives opportunity to fast change raw material, color and production efficiency
- *TEKNOCLEAN eliminates stubborn remains,oxidation and cooking residues
- *TEKNOCLEAN suggests low purging process costs with easy handling
- *TEKNOCLEAN is used with PVC, PP, TPU, PES, PA, POM, HDPE, LDPE, EVA, PS, ABS, PMMA, PC, SAN, SBS, SEBS, CA, PET, PBT etc...
- *TEKNOCLEAN can be used all plastic machineries
- *Injection molding (conventional and hotrunner toolings)
- *Extruders (compounding, sheet,profile,cable, pipe)
- *Blowmoulding and film blowing
- *TEKNOCLEAN SOLVES ALL THE PROBLEMS RELATED TO MACHINERY PURGING

PURGING PROCEDURE FOR INJECTION MOLDING MACHINES WITH CONVENTIONAL TOOLING

1-Preparing the Machine

- *Decrease the screw temperatures 20-30 °C from the current temperatures. Please check temperature/proportion table.
- *Nozzle area temperature should be normal processing temperature(don't decrease 20-30 °C)

2-Preparing the Purging Mixture

- *Shake TEKNOCLEAN bottle well before use
- *Put 3-4% TEKNOCLEAN into natural color PP granules and mix very well.To adjust total amount,please check screw diameter/mixture amount table

3-Purging Process

- *Check the screw temperatures are decreased 20-30 °C. Put the prepared purging mixture through the machine
- *Decrease the screw speed up to 50% or lower and let the purging mixture go through
- *Increase backpressure slightly
- *Use total injection stroke for purging
- *This purge can also be injected into opened mould to clean tooling

4-Rinsing

Use pure PP naturel for rinsing machine

5-Check

Use your new next plastic and check result.If there is problem apply steps 2-3-4 again

6- Finish

- *Control any remaining purging mixture granules in feed section. For new raw material bring to normal production temperatures, back pressure, screw speed as required
- *Machine is ready for new material molding.

PURGING PROCEDURE FOR INJECTION MOLDING MACHINES WITH HOTRUNNER TOOLING

1-Preparing the Machine

*Decrease the screw temperatures 20-30 °C from the current temperatures. Please check temperatures/proportion table.

*Hotrunner and nozzle temperatures should be increased 50 °C above normal.

2-Preparing the Purging Mixture

*Shake TEKNOCLEAN bottle well before use.

*Put %3-4 TEKNOCLEAN into natural color PP granules and mix very well. To adjust total amount please check screw diameter/mixture amount table.

3-Purging Process

*Check the screw temperatures are decreased 20-30 °C

*Check the hotrunner and nozzle temperatures are increased 50 °C above normal temperatures.

*Put the prepared purging mixture through the machine.

*Increase back pressure slightly.

*Decrease the screw speed up to %50 or lower and let the purging mixture go through.

*Use total injection stroke for purging.

*While the mold is open this purge can also be injected into hotrunner tooling to clean dirty channels.

4-Rinsing

Use pure PP natural for rinsing machine

5-Check

Use your new plastic and check result. If there is still problem apply steps 2-3-4 again.

6-Finish

*Control any remaining purging mixture granules in feed section. For new raw material bring to normal production, nozzle and hotrunner temperatures, backpressure, screw speed as required.

*Machine is ready for new material molding.

PURGING PROCEDURE FOR EXTRUDERS, BLOWING AND FILM BLOWING MACHINES

1-Preparing the Machine

- *Remove screens from machine.
- *Decrease the screw and braker –plate temperatures 20-30 °C from the current temperatures. Please check temperature/proportion table.
- *At the tooling keep normal temperatures .
- *If the screens are in the place do not decrease braker-plate area temperatures.

2-Preparing purging mixture

- *Shake TEKNOCLEAN bottle well before use.
- *Put %3-4 TEKNOCLEAN into naturel PP granules and the mix very well.To adjust total amount, please check screw diameter/mixture amount table.

3-Purging process

- *Check the screw and braker plate temperatures are decreased 20-30 °C from the current temperatures.
- *Put the prepared mixture through the machine.
- *Reduce the screw speed up to %50 or lower and let the purging mixture go through.

4-Rinsing

Use pure PP naturel for rinsing machine

5- Check

Use your new plastic and check result. If there is still problem apply apply steps 2-3-4 again.

6-Finish

- *Control any remaining purging mixture in the feed section. For new raw material bring to normal production temperature of screw, braker plate temperatures and screw speed as required.
- *Inset screens again.If required.
- *Extruder or blowing machine is ready for new material extrusion or blowing.

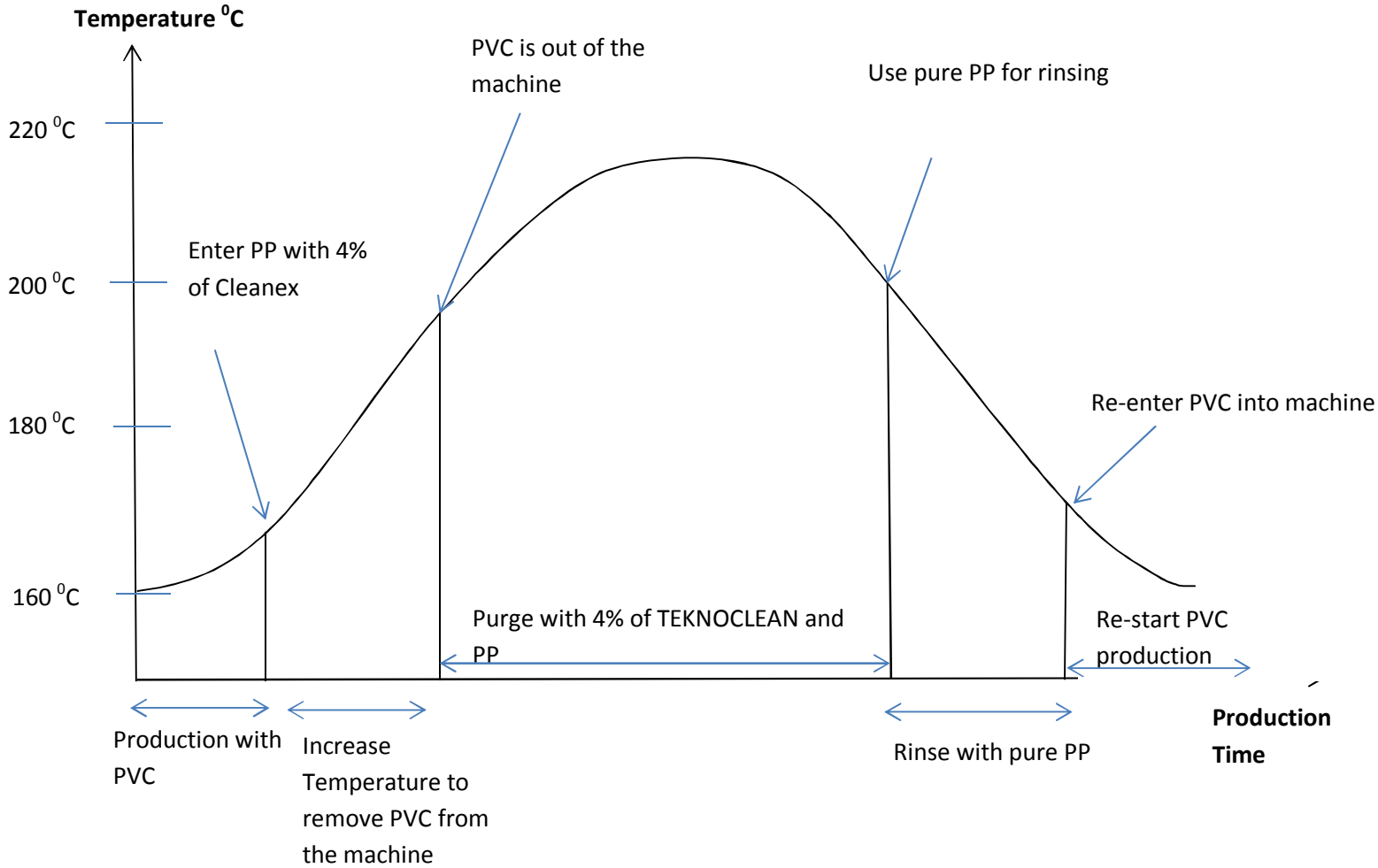
PURGING PROCEDURE FOR PVC

If there is PVC in the machine, we suggest to use PP as the purging material carrier. This gives you to reach temperature from 200 °C up to 220 °C. When rinsing with pure PP, temperature will be decreased to 165C to 185 C. This machine will be ready again to work with PVC.

FOR PVC APPLICATIONS WE SUGGEST TO APPLY BELOW STEPS

- 1- Remove the nozzle and clean it manually.
- 2- Put to machinery the purging mixture (PP + %4 TEKNOCLEAN) at PVC production temperatures (160 °C-180 °C)
- 3- Increase the temperature up to 180-200 °C, operate with this purging mixture until only PVC remainders are leaving.
- 4- Increase the temperatures up to 200 °C to 220 °C and continue the purging operations.
- 5- Decrease the temperatures 180-200 °C, rinse with a small quantity of pure PP.
- 6- Decrease the temperatures 160-180 °C.
- 7- Set screw stroke as required.
- 8- The machinery is ready for new PVC production.

PVC CLEANING PROCEDURE



TEKNOCLEAN MIXTURE AMOUNT- SCREW DIAMETER TABLE

Screw diameter (mm)	20-40	40-50	50-60	60-80	80-100	100-120	120-150	150-175	175-200
Carrier polymer PP, kg	0,5-1	1-3	3-5	5-10	10-25	25-35	35-70	70-90	90-150
TEKNOCLEAN amount, gr %3-4 of total PP	15-40	30-120	90-200	150-400	300-1000	750-1400	1050-2800	2100- 3600	2700-6000

TEMPERATURE/PROPORTIONS TABLE

		Processing temperature (°C)	Purging temperature (°C)	TEKNOCLEAN amount in purging mixture	
				in %	gr/1000gr
Acrylnitrile-butadiene styrene	ABS	200-220	170-190	3-4	30-40
Styrene-acrylonitrile	SAN	200-220	170-190	3-4	30-40
Thermoplastic polyurethane	TPU	200-220	180-200	3-4	30-40
Polyethylene	HDPE/LDPE	180-220	150-190	3-4	30-40
Polypropylene	PP	180-220	150-190	3-4	30-40
Polycarbonate	PC	240-280	210-250	3-4	30-40
Polyethylene terephthalate	PET	180-220	150-190	3-4	30-40
Polybutylene terephthalate	PBT	230-250	200-230	3-4	30-40
Polyvinylchloride	PVC	160-180	---	4	40
Polystyrene	PS	200-220	170-190	3-4	30-40
Polyoxymethylene	POM	170-210	140-170	3-4	30-40
Polyamide 6	PA6	220-260	200-230	3-4	30-40
Polyamide 6-6	PA66	260-290	230-260	3-4	30-40
Polymethyl-methacrylate	PMMA	200-230	170-200	3-4	30-40
Styrene-butadiene-styrene	SBS	170-180	140-150	3-4	30-40
Styrene-ethylene-butadiene	SEBS	180-200	150-170	3-4	30-40
Cellulose-acetate	CA	230-260	200-230	3-4	30-40
Polyphenylene sulfide	PPS	310-340	280-310	3-4	30-40
Polyether ketone	PEEK	360-400	330-370	3-4	30-40

Special Requirement & Failure Situations

How to purge under special requirements

TYPES	SOLUTIONS
Small screw (<= 30 mm)	If there is a feeding problem *Decrease the amount of TEKNOCLEAN in the purging mixture
Machine with de-gassing zone (vented barrels)	*If there is a problem decrease the temperature of de-gassing area *Purge as standart procedure *Purge mixture should be fed from the de-gassing hole
Changes in temperature from 180°C to 290°C or from PE to PC or PA66	Use PP naturel granules for best result
Using expensive raw materials eg PPS	Use PP naturel granules and 3% TEKNOCLEAN best result. Because PP is stable until 320°C

HOW TO RESTORE BAD PURGING EFFECTS

PROBLEM	REASON	SOLUTION
After purging with TEKNOCLEAN If there is any contaminations in plastic melt	Extra difficult contamination	*Apply the standart purging procedure *Decrease the temperature in machine even more
	*Serious damage on the screw *Damage on inside wall of cylinder	*Change screw *Rework cylinder
If hotrunner system is not cleaned	Hotrunner temperature is too low	Increase temperature of hot runner system more

TEKNOCLEAN is also available manually cleaning as a polishing agent for tools and all stainless steel surfaces.