

#### **PROFILE**

Nano Pouyesh Kimiya Co. (NPK) as a manufacturer & trading company founded in 2009 is engaged in production, R&D, marketing, technical services and commercial activities. NPK Company has a great technological and commercial relationship with Iranian Petrochemicals. We have supplied equipment, catalysts, additives, solvents and peroxides for petrochemical, oil and gas industrial chemistry from Germany, Italy, Netherland, Romania, Turkey, Japan, Korea, China, India, etc.

Today **NPK** is one of the best suppliers of chemicals like:

- ✓ PPA active agents (representation of Lanpoly company)
- ✓ Titanium Dioxide
- ✓ PE cling masterbatch
- ✓ Purge compound
- ✓ PP peroxide masterbatch rheology (MFI) modifier
- ✓ Erucamide slip active agent
- ✓ Anti-Fog active agent and PE base masterbatch
- ✓ Optical brightener active agent and PE base masterbatch
- ✓ Anti-UV active agent
- ✓ Anti-Oxidant active agent
- ✓ Dispersing active agent
- ✓ TPE-O Vistamaxx 6202 (propylenebased elastomer)

#### **CONTACT**

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# **PURGE COMPOUND**

# **INTRODUCTION**

A purge compound is a plastic resin compound designed to clean all primary plastic machinery (**injection molding machines, blow molding machines, extruders**) when changing color, resin or simply to remove black specks or contaminations.



# WHY CONTAMINANTS APPEAR

- Thermally/ shear-sensitive materials/ blends/ compounds being degraded inside the extruder.
- Materials presenting metal affinity and remaining stuck.
- Design and ageing of the machinery impacting the presence of dead zones in the barrel/ die-head.
- Ageing and design of the screw.
- Frequent changes of RPM.
- Unusual pressure variation.

## **REASONS OF PURGING**

- Solving quality issue
   Solving quality issue during color & material changes.
- Remove contamination
   Remove contamination created via carbonization, unmelting.
- Production planning
   Reduce substantial time & cost to clean the screw.



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# When purging:

- Between 2 production batches
   Extrude purge compound + last resin base (1:1)
- Startup and shutdown Extrude purge compound.



## SUPPLIED PURGE COMPOUND

**Clean Express** produced by **Polytechs** (France), has perfectly demonstrated its higher & faster cleaning power in comparison to the virgin or the manual cleaning solutions due to its hybrid nature (mechanical & chemical effects) and defining it as a cost-effective solution:

- 2 times faster vs the virgin resin.
- Close to 100 times faster vs the manual cleaning.

Clean Express	Applications	Suitable for
Clean HDPE HDPE base	Blown & cast film, Injection molding, Wires & cables, Pipes, tubes & profiles, 3D printing (Effective Temp.: below 180°C)	LDPE, LLDPE, EVA, PA11, PA12, PET, TPE, SEBS, TPU, Rigid PVC, XLPE/PEX
Clean LDPE LDPE base	Blown & cast film, Injection molding, Wires & cables, Pipes, tubes & profiles, Bio market, Barrier films (Effective Temp.: 100-180°C)	LDPE, LLDPE, Flexible PVC, Bio resins, XLPE/PEX
<b>Clean PP</b> PP base	Blown & cast film, Injection molding, Bio market (Effective Temp.: below 200°C)	BOPP, CPP, PPH, PPC, PPR
Clean HP PE Metallocene base	Blown & cast film, Injection molding, Wires & cables, Pipes, tubes & profiles, Bio market, Barrier films (Effective Temp.: 220-320°C)	LDPE, LLDPE, HDPE, EVA, EVOH, PPH, PPC, PPR, TPE, Styrenics, Bio resins, XLPE/PEX
Clean VHT Methacrylate base	Blown & cast film, Injection molding, Pipes, tubes & profiles, Compounding (Effective Temp.: 80-230°C)	PA6, PA6.6, PET, PC, PBT, PMMA, SMMA

## **CLEAN Express ...**

- contains abrasive and surfactant agents that clean mechanically and chemically the extruder and the die.
- is a filmable resin that will allow a continuous extrusion while purging.
- contains no toxic, volatile, or corrosive additives.