INDOFIL INDUSTRIES LIMITED

(Formerly known as Indofil Organic Industries Ltd.)

PVC ADDITIVES

INDOFIL PMA-175

Solid Lubricating Processing Aid for PVC

1 INTRODUCTION

Indofil manufactures a range of plasticizers, processing aids and impact modifiers for PVC. INDOFIL PMA-175 is an acrylic polymer having strong external lubricating and processing aid properties for rigid PVC. This is generally used in conjunction with main processing aid like INDOFIL K-120ND or INDOFIL K-125.

2. PHYSICAL CHARACTERISTICS

TYPICAL PHYSICAL PROPERTIES (These do not constitute specifications)	
Appearance	White, fine free –flowing Powder with uniform particle size
Bulk Density, g/cc	0.38 to 0.42
Specific Gravity, @ 25°C	1.15
Refractive Index, @ 25°C	1.47
Molecular Weight	Low
Volaties (%)	Max 1
Sieve Test Retention time	
60 mesh	Max 8
100 mesh	Max 20
200 mesh	Max 60
Clarity in 10% toluene Solution	Clear
10% Toluene Solution Viscosity (cps)	10-150

Advantages

Indofil PMA-175 has following advantages:

- Reduced sticking to hot metal surfaces at high temperatures.
- Improved clarity and gloss.
- Elimination of plate out.
- Controlled fusion.
- Food contact applications possible.
- Elimination of surface detects

3 PERFORMANCE CHARACTERISTICS

3.1 Lubrication

The important property of external lubricants is to release PVC compounds from hot metal surfaces under dynamic conditions. The excellent release provide by INDOFIL PMA-175 can be checked on a roll mill at high temperatures used for processing PVC compounds. INDOFIL PMA-175 modified compounds are easy to remove even, after several minutes on the mill. Conventional external lubricant modified compounds can not be removed cleanly even after the briefest time.

INDOFIL PMA-175 remains effective even at temperatures up to 215°C, a temperature range giving improved output and efficiency.

3.2 Heat Stability

Adding INDOFIL PMA-175 to PVC compounds increases time to degrade. It permits higher processing temperatures, longer production runs and less generation of scrap.

3.3 Clarity

There is no change in light transmission or haze when INDOFIL PMA-175 is added to general purpose clear compounds. In some cases, a better appearance is obtained due to improved surface of the fabricated part. Using conventional external lubricants for high temperature release, clarity is deteriorated. INDOFIL PMA-175 enables processors to lubricate at levels never before practical with clear PVC compounds.

3.4 Processing Aid Properties

INDOFIL PMA-175 gives sufficient hot strength, elongation, homogeneity and fluidity. This gives greater latitude in processing conditions during extrusion including blown film production, blow moulding, calendaring, injection moulding and thermoforming.

3.5 Plateout Prevention

Conventional lubricants like metallic stearates contribute to plateout. INDOFIL PMA-175 can be used to eliminate plate out.

3.6 Physical and Chemical Properties

Normal usage level of INDOFIL PMA-175 does not significantly affect physical properties, chemical and solvent resistance.

4. APPLICATIONS

The advantages of INDOFIL PMA-175 incommercial processing are given below:

4.1 Calendering

Higher processing temperatures and production rates, improved clarity and appearance, improved roll release, without sticking or plate out, smoother rolling bank, better hot strength and improved thermoforming, improved print and ink acceptance make this grade perfect choice for people making calendered film.

4.2 Extrusion Pipe & Profile

Here the advantages of using INDOFIL PMA-175 and Higher filler level for low cost formulation. Reduced sticking or decomposition at stagnation points on screws and dies, longer production runs, less downtime and improved processing efficiency, higher product quality and production efficiency, minimized melt fracture or tearing.

4.3 Blow Moulding

In blow moulding of clear PVC bottles, make use of INDOFIL PMA-175 for Longer running times, improved appearance, strength and clarity.

4.4 Injection Moulding and Blow Film

Improved product quality and production rates, easier processing through tolerance of broader range of injection speeds and temperatures are the typical advantages you like for in such there are delivered by INDOFIL PMA-175.

4.5 Usage Level

0.5 - 3 pHr of INDOFIL PMA-175, External lubricants such as Paraffin Waxes, Fatty Acids, Monotonic Ester Waxes, Poly Ethylene Wax, Etc., Should be reduced. At 1pHr of INDOFIL PMA-175, 1/3 of external lubricant should be reduced. INDOFIL PMA-175 does not/replace INDOFIL K-120ND as processing aid which should be used for its cost efficiency. However, INDOFIL K-120ND does not lubricate or promote release at high temperatures like INDOFIL PMA-175 does.