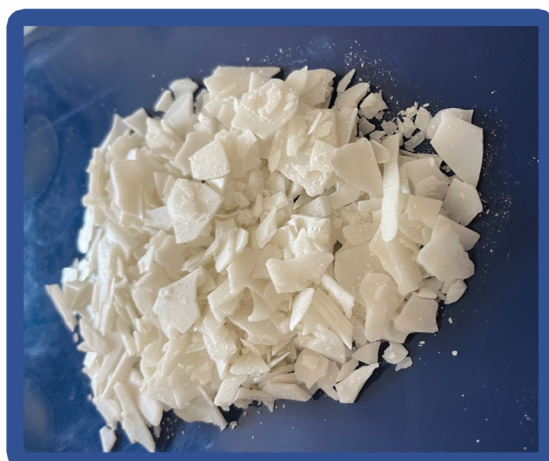


OXIDIZED POLYETHYLENE WAX (OPE WAX)

INTRODUCTION

Oxidized Polyethylene Wax (OPE Wax) is a low molecular weight polyethylene that has been subjected to an oxidation process, introducing polar groups (carbonyl, hydroxyl) into the molecular chain. These polar groups significantly improve compatibility with polar resins, fillers, and pigments, and enhance wetting and dispersion performance in polar systems compared to non oxidized PE wax

OPE wax appears as white to light yellow powders, granules, or flakes. It is non toxic, non corrosive, and features high softening point, low viscosity, and excellent chemical stability. It shows good compatibility with rubbers, plastics, paraffin waxes, and many other materials. Its quality is influenced by acid value, viscosity, melting point, density, hardness and color.



Properties	Unit	Specifications	Method
Appearance	-	White to light-yellow powder / flake	Visual
Melting point	°C	93-103	ASTM D3418
Density	g/cm ³	0.88-0.95	ASTM D1505
Viscosity 140 °C	cp	40-500	ASTM D1986
Softening point	°C	85-90	ASTM D-36
Penetration	d-0.1mm	5-10	ASTM D1321
Acid value	mgKOH/g	5-30	ASTM D1386

APPLICATION

Thanks to its polar groups and excellent emulsifying properties, OPE wax is widely used in many fields:

- ◆ **PVC processing** -internal/external lubricant for profiles, pipes, sheets, cables, and foamed products; balances lubrication, promotes plastification, improves mould release
- ◆ **Masterbatch & pigment dispersion** -dispersing agent for fillers and pigments, improves dispersion and final appearance
- ◆ **Hot melt adhesives** -viscosity modifier and performance enhancer
- ◆ **Coatings & printing inks** -improves surface slip, abrasion resistance, and scratch resistance in water based and solvent based systems
- ◆ **Textile finishing** -emulsified for printing and finishing to impart softness
- ◆ **Polishes & shoe creams** -emulsified for water based floor polishes, shoe polishes, etc.
- ◆ **Paper industry**- moisture proof coating, release agent, and sizing agent
- ◆ **Asphalt modification** -lowers softening point, improves workability
- ◆ **Candle making** -increases softening point and strength, gives good gloss and clean burning
- ◆ **Rubber & plastic processing** -lubricant and mould release agent for engineering plastics and composites
- ◆ **Precision casting** - mould release agent

