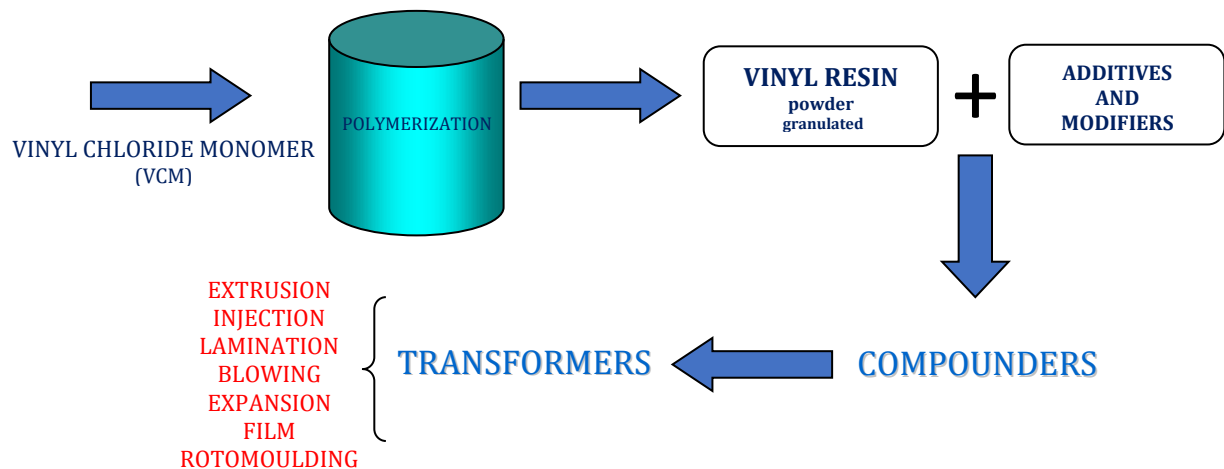


PVC Lubricants

PVL Wax Grades

How is PVC made?



Types of PVC

- Flexible PVC: called as plasticized PVC or Soft PVC
- Rigid PVC: also called un-plasticized PVC or hard PVC

The PVC Compound

PVC cannot be used as it is, and it is necessary to add:

- Stabilizers: To preserve the polymer
- Fillers: For mechanical properties and to reduce cost
- Plasticizers: To increase softness, to decrease brittleness and to decrease glass transition temperature
- Lubricants: To lubricate the polymer and the filler, to reduce friction and as mould release agent



Lubricants

Used in extrusion, calendaring, and injection processes

- Internal:
 - Lubrication of the polymer and the filler to reduce frictional forces within the polymer matrix and, in so doing, lower the effective viscosity
- External
 - Increase of the processability by decreased friction between the polymer melt and hot metal surfaces during processing
 - Mould release agent

External lubricants should have poor compatibility with PVC. Internal lubricants are more compatible and have high polarity.

Petro White PVL Waxes are alpha olefin synthetic waxes with no impurities free from sulphur and aromatic compounds. Petro White PVL Waxes are excellent external lubricants, it can also be used as internal lubricants alone or in combination with Polyethylene waxes and other components. PVL waxes as internal lubricants can effectively control shear conditions, promote flow, control friction and melting properties, which ultimately improving thermal stability. At the same time, because of its high crystallinity and linear structure, PVL waxes improve the physical and processing properties of PVC products.

Selection of lubricants is depending upon the type of heat stabilizer used. Rigid PVC always requires lubricants for processing (2-4 %), and lubricant combinations are often employed (e.g., calcium stearate, PVI wax for PVC pipes). Flexible PVC requires less lubricant (ca. 0.5 %). We encourage our customers to test our samples and reach to the optimum percentage.

Typical Test Data				
Characteristics	Test Method	Synthetic Wax		
		PVL 2024	PVL 2428	PVL30
Appearance	ASTM D-4176	Bright and Clear	Bright and Clear	Bright and Clear
Flash Point, °C	ASTM D-92	185.0	220.0	255.0
Specific Gravity@ 60°F	ASTM D-287	0.811	0.825	0.83
Viscosity@100 °C, cSt	ASTM D445	2.1	2.5	10
Color, Saybolt	ASTM D-6045	30	30	20
Drop Melting Point, °C, min	ASTM D-127	33	63.5	75
Variations in product typical test data are to be expected in normal manufacturing condition				

Main Features

Excellent mechanical and electrical properties
Good dispersion and fluidity
Good mold-stripping performance
Lightfastness
Good stability against light and chemical erosion
Improve the production efficiency of plastic processing
Improve appearance of products

Application

Wide range of application like in PVC pipes, profiles, films, cables as well as other plastics and rubbers. PVL waxes also serve as antiblocking agents and improve the flow behavior of ABS, SAN, and polystyrene, polyamide release agents and masterbatch pigment carriers.

Package

PVL 30 can be supplied in 25kg polyethylene bag and jumbo bag
PVL 2024 and PVL 2428 in drums or ISO tank

- Petro White also manufacture PE Wax and can provide technical support to customers by offering customized blend. Please contact us.