

Technical data sheet
PTFE Lubricant powder

Grade

SH

PROPERTY		(1)	
Polymer Type			suspension
Bulk density	ASTM D4894	g / l	450
Moisture content	INTERNAL	%	0,02
Average primary part size	INTERNAL	µm	
Particle size distribution:			
at 10%	INTERNAL	µm	1,5
at 50%	INTERNAL	µm	10,0
at 90%	INTERNAL	µm	16,0
Specific surface area	ASTM D4567	m ² /g	3
Melting point	ASTM D4591	°C	325,0
Melt flow index	ASTM D1238	g/10 min.	10,0
Colour			white
HF content	INTERNAL	ppm	

PTFE Lubricant powder

Features and benefits

PTFE (polytetrafluoroethylene) lubricant range of products are finely divided powders with different low molecular weight, particle size distribution, shapes and morphology.

PTFE lubricant powders are designed to be mixed with other solid or liquid material to achieve some of the unique properties of PTFE polymer.

PTFE polymer has a wide working temperature range, it is inert to almost all chemicals and solvents, it is hydrophobic, it is a good electrical insulator and it has excellent weathering and ageing characteristics.

PTFE lubricant powders are ideal as additives because they can influence the behavior of many hosting materials without reacting with them, but with the benefit to reduce the coefficient of friction, increase wear resistance, improve non-stick properties and enhance anti-dripping properties.

PTFE lubricant powders can be incorporated into a wide variety of hosting materials like thermoplastics / thermosettings (e.g. polyacetals, polyamides, polycarbonates, polyesters, polyimides, polysulfides, polysulfones / epoxy, phenol-formaldehyde, melamine resin) at concentrations typically from 5-20 % b.w. and elastomers (e.g. fluoroelastomers, neoprenes, nitriles and silicones) at level of 10-25% b.w.. They can also be added in printing inks formulations (e.g. lithographic, flexographic, gravure) in reason of 1-5% b.w. for better image protection and higher productivity, in combination with polyethylene waxes to reach the required level of characteristics (5-15% b.w.) and for industrial coatings (5-15% b.w.) They are also suitable for oil and grease formulation to adjust the viscosity (up to 15% b.w.)

When PTFE lubricant powders are used alone as powder or in paste can be regarded as solid lubricants for high performance sealants and for wear surfaces in hostile environment, while added in spray formulation they act as mold release agent. Further they can be dispersed in water or in organic solvent for direct usage or as an intermediate additive for later formulation .

Recommended processing conditions

The homogeneous incorporation of PTFE lubricant powders is the main and more important factor to impart at the hosting material the enhancements due to the PTFE polymer properties.

For thermoplastics blends, PTFE lubricant powders can be directly introduced into the melt. In case of others materials and depending on the application a variety of mixing equipment can be used, like high speed mixers and tumble mixers for dry blends, while propeller mixers are preferred for wet formulations. In presence of relatively high viscosity formulations it is recommended to use glass bead mill while for very high viscosities substances like oils and greases it is suggested the roll mill (triple roll mill).

Specifically for elastomer the PTFE lubricant powders are mixed by Banbury or a two-rolls mixer.
For additional information or other specific request please contact our customer service office at:

Packaging supply

All PTFE lubricant powders are packaged in moisture and dust proof double PE liners inside a cardboard box.

Cardboard box amount: 15 Kg

Quantity per pallet: 540-600 Kg

We can also supply all PTFE lubricant powders in plastic drums of 25 Kg and the quantity per pallet is 300 Kg.

Storage conditions

All PTFE lubricant powders if properly hold in the sealed original package in a clean and dry place at temperature below 30°C they can be stored for a relatively long period of time (Generally 6-12 months).

Safety and handling precautions

Before use the powder ask to Krystal Lubetech the Material Safety Data Sheet for the specific grade with detailed information.