ENGINEERING DATA SHEET

DSM 3.3.1

PTFE

General:

A solid form of fluorocarbon, PTFE is a strong, tough, waxy, non-flammable synthetic resin. The initial form is a white powder which is then compressed and heated (sintered) to create solid blocks, sheets and rod, from which more detailed shapes can be machined.

This is a compound with an elevated molecular weight and a melt transition at 327°C. It can only be dissolved by hot fluorine gas or certain molten metals, making it extremely resistant to corrosion & most chemicals.

Film and wire coatings are produced by loading up the PTFE powder with a lubricant to extrude the shape, extract the lubricant and sinter the extrusion to give a cohesive film or coating.

It is hydrophobic, which means that it cannot be made wet by substances containing water or by water itself.

ASM (DEK) Applications:

The low level of friction coefficients against all types of substrates, it an ideal coating for machine parts which are exposed to heat, wear, and friction.

Features:

- An excellent barrier to gas, moisture and heat
- Has remarkable chemical resistance and is insoluble in all known solvents
- Attacked only by molten alkali metals and fluorine at high temperatures
- Has excellent resistance to acids, alkali and solvents
- High continuous temperature use (180°C).
- Lubricous

Limitations:

- High cost.
- Low strength and stiffness.
- Cannot be melt processed

These values are representative. For critical applications, refer to data-Sheet.

MECHANICAL PROPERTIES					
	HARDNESS Shore A	TENSILE STRENGTH:	YOUNGS MODULUS:	POISSONS RATIO:	DENSITY:
PTFE	---	30 MPa	0.5 GPa	0.46	2160 Kg/m^3

Alternatives:

Alternatives are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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DCR	42122	44832							