TEFLON [PTFE] CABLES

INTRODUCTION & DEVELOPMENT

Thermoplastic resins such as PVC or PP have largely replaced other type of materials for cable insulation. Which due to their cost effectiveness and easy availability, when used for general purpose building wiring.

In certain area of application, however these materials are not adequate; Hence further Research and development in insulating material has given birth to the ultimate material for insulation of conductors. Where SAFETY OF FIRE HAZARDS & RELIABILITY of long life are prime concern called TEFLON (poly tetra flouro ethylene), Developed into the labs of DUPONT INTERNATIONAL giant in chemical technology.

SUPERIORITY OF TEFLON AS CABLE INSULATOR

FIRE PROTECTION

These cables in any condition will not propagate fire or serve as fuel for fire. Under writers laboratories has listed PTFE as self-extinguishing group I electrical products.

UPPER SERVICE TEMPERATURE

Outstanding thermal and electrical properties, temp. range from - 60^0c to 250^0c. The electrical properties of PTFE cables are not altered by long term heating.

OVERLOAD PROTECTION

These cables can withstand (due to higher temp. range) overheating due to temporary current over load . It reduces the risk of flash over in tightly bundled wiring and subsequent damages to nearby wires.

CHEMICAL & WEATHER RESISTANCE

Best known chemical & weather Resistant-insulating material.

RESISTANCE OF MECHANICAL ABUSE

Due to their higher mechanical Abrasion Resistance value they resist damages due to any mechanical abuse.

SPACE SAVING

Insulation of PTFE Resins permits reduced size and wt., permitting more circuits per conduits and ease of installation in confined space. Low Co-efficient of friction of PTFE provides a slippery surface for easy conduits pull.

PROPERTIES OF PTFE Vs PVC

PROPERTIES		PTFE	PVC
Tensile strength [kg/Sqcm]		250	140
Elongation [%]		350	250
Melting Point [C]		325	90
Service Temp.	High	250^0 C	70^0 C
	Low	- 60^0 C	10^0 C
Fire Resistance		Excellent	Good
Dielectric constant		2.1	4.6
Sp. Gravity		2.15	1.38
Vol. Resistivity (ohm-cm)		10^{16}	$2x10^{18}$
Oxygen Index		95	31
Resistance	Acid/solvent	Excellent	Normal