



## SHAKUN POLYMERS LIMITED

HTP-03-MI

MEDIUM DENSITY POLYETHYLENE COMPOUND FOR  
SOLID INSULATION OF TELEPHONE CABLES

***Description***

HTP-03-MI is a Medium Density Insulation Compound designed for high extrusion speeds. It is suitable for dry core and petroleum jelly filled cables. This compound contains a special Metal Deactivator and other additives to give good oxidation resistance in contact with copper and filling compounds commercially used in Jelly filled Telephone Cables

***Specification***

HTP-03-MI also meets the following specifications:

- BS 6234: TYPE 03
- ASTM D 1248, TYPE II, CLASS A, CATEGORY 5, GRADE E 5.

***Properties***

<b><i>Physical Properties</i></b>	<b><i>Test Method</i></b>	<b><i>Unit</i></b>	<b><i>Typical Value</i></b>
Melt Index	ASTM D 1238	g/10 min	0.30
Density at 27° C	ASTM D 1505	g/cm <sup>3</sup>	0.934
Tensile Strength	ASTM D 638	MPa	18
Yield Strength	ASTM D 638	MPa	15
Elongation	ASTM D 638	%	700
OIT, 200 ± 1 °C, AL-Pan	ASTM D 3895	min	> 60
Shore D Hardness	ASTM D 2240	--	54
<b><i>Electrical Properties</i></b>			
Dielectric Constant	ASTM D 150	---	2.30
Dissipation Factor	ASTM D 150	---	0.0004
Dielectric Strength	ASTM D 149	kV/mm	20
Volume Resistivity	ASTM D 257	ohm-cm	10 <sup>16</sup>

\*Data should not be used for specification work

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***Application***

HTP-03-MI is based on a specially developed Medium Density Compound. It has consistent polymer density in the acceptable range to retain maximum mechanical properties and resistance to the heat deformation yet gives ease of extrusion and a greater degree of toughness. It has high resistance to copper catalyzed thermal oxidation and excellent resistance to petroleum jelly absorption. The combination of these properties offer stability for use as telephone signal insulation in air spaced and jelly filled cables and in environments subject to high temperature where insulation toughness is a requirement.

***Processing***

HTP-03-MI provides excellent surface furnish and high output rates over a broad range of conditions. As a guide a typical extrusion process for a 0.15 mm radial thickness insulation on a 0.5 mm copper conductor is outlines below :-

Extruder – Diameter 80 mm, Length 24 D, Line speed Up to 1800 m/min, Conductor pre-heating Temperature 70-90<sup>0</sup> C.

Barrel Zone 1	185 <sup>0</sup> C	Zone 2	195 <sup>0</sup> C	Zone 3	200 <sup>0</sup> C
Zone 4	210 <sup>0</sup> C	Zone 5	210 <sup>0</sup> C	Head/Die	225 <sup>0</sup> C

***Shipment***

HTP-03-MI is available in the form of free flowing granules and supplied in raffia bags with a net content of 25 Kgs.

This information is to the best of our knowledge, accurate but all recommendations or suggestions are made without guarantee or legal liabilities since the conditions of use are beyond our control. The typical values given do not constitute specification for the product but represent typical analytical values.

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