

PLJ 603 (A) HD Natural

Product Data Sheet

High Density Polyethylene Natural Jacketing Compound **(MFI ≤ 0.4)**

DESCRIPTION

PLJ 603(A) HD Natural is a high density polyethylene, extra tough, jacketing compound combining excellent environmental stress crack performance and extrudability. It is suitable for air spaced or filled telephone cable as well as medium and high voltage cable jacketing applications. It contains an antioxidant package to impart excellent resistance to thermo-oxidative degradation.

SPECIFICATIONS

PLJ 603(A) HD Natural complies with the following raw material specification: -

ASTM D 1248 Type 3, Class A, Category 5, Grade J4, J5, E10

PLJ 603(A) HD Natural jacketed cables, when manufactured employing sound extrusion practices and strict process control, will comply with the requirements of the following standards:-

ICEA S-84-608-ICEA 5-61-402

IEC 60974/60794

DIN VDE 0207 Type2YM3

IEC 60502, Type ST3/ST7

HD 632 S1 ST7

HD 603 S1 DMP 1, 2, 5, 7, 8

HD 620 S1/S2 Part 1 table 4B DMP2, 8-12 14, 15, 17

BS 6234: Type 03C, TS2

IEC 60708

NF C 32-060

IEC 60840, Type ST7, IEC 62067-ST7

EN 187105

EN 50290-2-24

APPLICATION

PLJ 603(A) HD Natural is for use by cable manufacturers requiring best performance properties for high gloss jacketing of medium / high voltage power & telephone cables produced at high extrusion speeds. The jacket is resistant to petroleum jelly absorption and its additive package imparts excellent resistance to long term thermo-oxidative aging.

PACKAGING

PLJ 603(A) HD Natural is sold in pellet form and is available in the following packages: -

- lined, palletised Octabins 600 kg net

The palletised package is stretch wrapped for environmental protection.

PROCESSING

PLJ 603(A) HD Natural possesses excellent extrusion characteristics; it may be processed on a wide variety of equipment employing the correct process conditions. As a general guide, a melt temperature in the range of 215°C to 235°C yields satisfactory results. Precise temperature profile values will vary depending on the extruder type, die tooling, cable size and line speed employed.

PHYSICAL & ELECTRICAL TYPICAL PROPERTIES

Test	Typical Value ⁽¹⁾	Unit	Test Method
Melt Flow Rate (190/2.16)	0.37	dg/min	ASTM D 1238
Density (Conditioning ISO 1183 - D)	941	kg/m ³	ASTM D 1505
Tensile Strength at Break ⁽²⁾	>28	MPa	IEC 60811-1-1
Elongation at Break ⁽²⁾	850	%	IEC 60811-1-1
Environmental Stress Cracking (F ₂₀)	>1000	h	IEC 60811-4-1/B
Brittleness Temperature ⁽²⁾	-76	C	ASTM D 746
DC Volume Resistivity ⁽²⁾	1 x 10 ¹⁵	Ω cm	ASTM D 257
Dielectric Breakdown strength ⁽²⁾	>32	KV/mm	IEC 60243
Dielectric Constant ⁽²⁾ (1 MHz)	2.3	-	ASTM D 150
Dissipation Factor ⁽²⁾ (1 MHz)	0.0004	Radians	ASTM D 1531

Note:

1. Do not use these values for specification purposes.
2. Determined on 2mm pressed sheet

HEALTH AND SAFETY

PLJ 603(A) HD Natural ingredients are essentially non hazardous in the delivered compound. Good fume extraction facilities are recommended to be available in the area of the die and initial cooling trough. Fines and dust particles associated with handling or conveying **PLJ 603(A) HD Natural**, as with all polyethylenes, may, under certain circumstances, pose an explosion hazard. Your facilities and procedures must be designed and operated to minimise the exposure of personnel to the dust and the possibility of a dust explosion occurring.

Please refer to the **PLJ 603(A) HD Natural** Material Safety Data Sheet for comprehensive information.

STORAGE AND HANDLING

PLJ 603(A) HD Natural may be bulk handled and conveyed using equipment designed for conventional polyethylene pellets. The conveying system should be adequately grounded to prevent accumulation of static charge and equipped with suitable filtration to prevent dust hazards within the factory and local environment.

PLJ 603(A) HD Natural must be stored unopened in a dry, vibration free, stable temperature environment for optimum performance. A temperature range of 5°C to 40°C is recommended with, ideally, no more than ± 10°C variation over a 24 hour period.

PLJ 603(A) HD Natural has a shelf life of 24 months from date of manufacturing.

THIRD PARTY MATERIALS

Insofar as materials not supplied by Plascom are used in conjunction with, or instead of Plascom materials, it is the responsibility of the customer to obtain all relevant data pertaining to their use and to satisfy himself as to their suitability. No liability whatsoever can be accepted by Plascom for use of their materials in conjunction with any other material.