



Technical Data Sheet

DOW™ Wire & Cable DFDA-3642 NT

Overview

DOW™ Electrical & Telecommunications DFDA-3642 NT is a hexene-copolymer LLDPE designed for low voltage cable applications. It is intended for use in a one-step (monosil) or two-step (Sioplas) process in unfilled or filled (such as HFFR) systems. It provides an excellent balance of processability, mechanical properties and electrical properties.

Sustainability Attribute:



An appropriate amount of metal deactivator and antioxidant should be added to meet the aging requirements. The material does not contain slip or anti-block additives.

Specifications

DOW™ Wire & Cable DFDA-3642 NT meets the following material specifications:

- ISO 17855-PE-LLD, J-AGN, 18-D045
- ASTM D 1248: Type I, Class A, Category 3

Additive

- Antioxidant

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density ²	0.920	g/cm ³	0.920	g/cm ³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	4.0	g/10 min	4.0	g/10 min	ASTM D1238
Mechanical					
Tensile Strength	4350	psi	30.0	MPa	IEC 60811-501
Tensile Elongation (Break)	850	%	850	%	IEC 60811-501
Flexural Modulus	42800	psi	295	MPa	ISO 178
Hardness					
Shore Hardness (Shore D)	48		48		ISO 868

1. ISO: International Standardization Organization
ASTM: American Society for Testing and Materials
IEC: International Electrotechnical Commission
2. 23°C

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

Physical Properties (Cont.)

Electrical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Volume Resistivity (73°F / 23°C)	5.0E+17	ohms·cm	5.0E+17	ohms·cm	IEC 60093
Dielectric Constant (73°F / 23°C), 60 Hz)	2.30		2.30		IEC 60250
Dissipation Factor (73°F / 23°C), 60 Hz)	5.0E-5		5.0E-5		IEC 60250

Additional Information

Storage

The environment or conditions of storage greatly influence the recommended storage time. Storage under extreme conditions may affect the quality, processing, or performance of the product. Storage should be in accordance with good manufacturing practices. The recommended storage conditions, in the original unopened packages, are dry conditions with temperatures between 10°C and 40°C. When stored between 10°C and 30°C, the product may be used by the customer for up to one year from the date of sale. The recommended maximum storage time is 1 year at 40°C. It is recommended that the practice of using the product on a first-in / first-out basis be established.

Packaging

DOW™ Wire & Cable DFDA-3642 NT can be delivered in different packaging types dependent on specific material handling needs. This includes 25 kg bags, 500 kg octavins or 1000 kg octavins. Please consult with your local Dow sales representative to discuss your packaging needs.

Extrusion Notes

DOW™ Wire & Cable DFDA-3642 NT provides excellent performance and outstanding output rates over a range of extrusion conditions. For optimum results, melt extrusion temperatures in the range of 190°C to 220°C are recommended. The use of conductor pre-heat is recommended, especially for small size insulated wires. A cooling water temperature in the first cooling trough of 60–70°C is recommended to keep the shrinkage low. In general, the use of a minimum 60 mesh screen pack system is recommended.

It is recommended that melt pressure and optionally melt temperature be monitored during cable production. Prior to cable production, processing conditions, melt temperatures and melt pressures should be established by compound bleeding trials. Specific processing recommendations can only be made when information about the application and actual extrusion and processing equipment types are known.

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Medical Applications Policy (Cont.)

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For further information contact your Dow sales or technical representative to request a Medical Application Review Request Form.

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