DOW™ Electrical & Telecommunications

DFDA-1675 NT

Non-Halogen, Flame Retardant, Thermoplastic Jacket Compound

The Dow Chemical Company

Message:

Halogen-free flame retardant material, used for communication cables and sheathing materials
DFDA-1675 NT is a halogen-free flame retardant polyolefin thermoplastic material, used as a material for communication cables and sheathing.
DFDA-1675 NT has excellent electrical properties, flame retardant grade, processability and flexibility. After the official launch, DFDA-1675 NT will be called UNIGARD™RE DFDA-1675 NT.
Features
DFDA-1675 NT has the following characteristics:
high flame retardant performance
Excellent electrical properties and moisture resistance
Environmental protection (lead-free, halogen-free, sulfur-free/antimony-free)
low smoke, low corrosion and low toxicity
Has a good balance between toughness and flexibility
The extrusion process is easy, no special screw is required
compliance with ROHS regulations
Recommendations and specifications for use
DFDA-1675 NT is a transverse substrate material for Plenum Category 6 communication cables that require UL NFPA 262 combustion test grades. This combustion grade depends on the cable structure and requires separate testing and certification. Each manufacturer using DFDA-1675 NT must consult a standard testing organization to determine which tests and evaluations (if any) are required to obtain application certification.

General Information			
Uses	Flame Retardant Jacketing LAN Cable Separator LSZH Jacketing Wire and cable applications		
Agency Ratings	UL NFPA 262		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.54	g/cm³	ASTM D792
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness [1]			ASTM D2240
Shaw A	96		ASTM D2240
Shaw D	41		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2]	> 8.96	MPa	ASTM D638
Tensile Elongation [3] (Break)	> 120	%	ASTM D638
Flexural Modulus - 1% Secant [4]	265	MPa	ASTM D790
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Constant			ASTM D150
1 MHz [5]	3.24		ASTM D150

1 MHz	3.25		ASTM D150
Dissipation Factor [6] (1 MHz)	1.2E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index [7]	38	%	ASTM D2863
Plenum Burn Test - cross separator in Cat. 6 construction	PASS		UL NFPA 262

Additional Information

Colorability
DFDA-1675 NT EXP1 is a colorable compound. The color masterbatch materials recommended for use with polyethylene or ethylene copolymer wire and cable products are suitable for use in DFDA-1675 NT EXP1. Where optimal electrical performance is required, use a polyethylene homopolymer based color masterbatch to avoid deterioration of dielectric properties. Generally speaking, color masterbatch added at the level from 0.5 to 1.0% by weight gives adequate color and disperses well in the extrusion process. For black jacket applications, UV resistance can be also achieved by adding a carbon black masterbatch. However, the level may be higher, and depends on the type of carbon black masterbatch and the test requirement for the application.

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	127	°C
Cylinder Zone 2 Temp.	191	°C
Cylinder Zone 3 Temp.	191	°C
Cylinder Zone 4 Temp.	191	°C
Cylinder Zone 5 Temp.	204	°C
Die Temperature	204	°C

Extrusion instructions

螺杆类型:单跨测量螺杆螺杆 L/D 20:1 至 24:1压缩比 2.5:1 至 3.5:1筛网组 60/20,40/20 或 20 网孔模具压力/或管子打开下拉比 1.0 比 1.5螺杆冷却:无

NOTE	
1.	Based on plaques
2.	Based on tapes produced with a 20 mil die and draw down to 17 mils
3.	Based on tapes produced with a 20 mil die and draw down to 17 mils
4.	Based on tapes produced with a 20 mil die and draw down to 17 mils
5.	Aged 4 weeks, 90°F (32°C) and 90% Relative Humidity
6.	Aged 4 weeks, 90°F (32°C) and 90% Relative Humidity
7.	Based on plaques

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


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