Borstar® HE6068

高密度聚乙烯

Borealis AG

Technical Data

产品说明

Borstar HE6068 is a natural, UV-stabilised, colourable, bimodal high density (HD) jacketing compound, which is produced with the Borealis proprietary Borstar bimodal process technology.

Borstar technology allows the manufacturing of polymers outside the traditional MFR and density range making it possible to optimize processability, reduce shrinkage and yet provide excellent physical toughness and environmental stress crack resistance (ESCR).

Borstar HE6068 contains a well dispersed UV-stabiliser in sufficient amount providing a measure of weathering resistance.

Applications

Borstar HE6068 is designed for:

- Submarine and fibre optical cables

Borstar HE6068 offers substantially reduced shrinkage which helps to maintain low signal attenuation for fibre optic communication cables and low jacket retraction for energy cables in combination with excellent mechanical and barrier properties. Borstar HE6068 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of communication and energy cables.

Specifications

Borstar HE6068 meets the following material classification:

- ISO 1872-PE, KHLN, 45 D-022
- ASTM D 1248 Type III, Class A, Category 3, Grade E8, E9, J4

The following cable material standards are met by Borstar HE6068:

- DMP 5, 7, 13, 16, 18
- EN 50290-2-24

Cables manufactured with Borstar HE6068 using sound extrusion practice normally comply with the following cable product standards:

- IEC 60502, Part 2, Type ST7
- IEC 60840, Type ST7
- HD 603 S1, DMP 6
- DIN VDE 0818
- HD 620 S2, Part 1, table 4B, DMP 5, 13, 16, 18

Special Features

Borstar HE6068 consists of specially selected components to offer:

- Superior processability
- Excellent environmental stress cracking resistance (ESCR)
- Excellent abrasion & scratch resistance
- Low water permeability
- Good petroleum-jelly resistance
- Termite resistance
- Very good UV resistance
- Very low shrinkage
- Excellent surface hardness

总体

添加剂	• 紫外线稳定剂		
特性	• 防潮性 • 高 ESCR（抗应力开裂） • 抗紫外线性能良好 • 可加工性，良好	• 良好的着色性 • 良好耐磨损性 • 耐刮擦性 • 耐气候影响性能良好	• 韧性良好 • 收缩性低 • 双峰型分子量分布 • 硬度高

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总体			
用途	• 船用电缆护套 • 电缆护套	• 电器导线护套材料 • 电线电缆应用	• 光缆绝缘材料
机构评级	• ASTM D 1248, III, Class A, Cat. 3	• ISO 1872 PE KHLN 45D022	
外观	• 自然色		
形式	• 颗粒		
加工方法	• 挤出		

物理性能	额定值	单位制	测试方法
密度 [3]	0.944	g/cm³	ISO 1183
熔流率（熔体流动速率）(190°C/2.16 kg)	1.7	g/10 min	ISO 1133
抗环境应力开裂 (50°C, 10% Igepal, F0)	> 5000	hr	IEC 60811-406
机械性能	**额定值**	**单位制**	**测试方法**
拉伸应力 (屈服)	31.0	MPa	ISO 527-2/50
拉伸应变 (断裂)	900	%	ISO 527-2/50
弯曲模量	850	MPa	ASTM D790
硬度	**额定值**	**单位制**	**测试方法**
肖氏硬度 (邵氏 D, 1 秒)	61		ISO 868
热性能	**额定值**	**单位制**	**测试方法**
脆化温度	< -76.0	°C	ASTM D746
电气性能	**额定值**	**单位制**	**测试方法**
体积电阻率 [4]	1.0E+16	ohms·cm	IEC 60093
介电强度	70	kV/mm	IEC 60243-1
补充信息	**额定值**	**单位制**	**测试方法**
Pressure Test [5] (115°C)	< 10	%	IEC 60811-3-1

挤出	额定值	单位制
料筒1区温度	140 到 180	°C
料筒2区温度	140 到 180	°C
料筒3区温度	140 到 180	°C
料筒4区温度	140 到 180	°C
料筒5区温度	140 到 180	°C
熔体温度	180 到 200	°C
口模温度	180	°C