

## Borealis Visico™/Ambicat™ LE4421/LE4476 Polyethylene Compound, Crosslinkable

Category : Polymer , Thermoplastic , Polyethylene (PE)

### Material Notes:

Visico™ LE4421 / Ambicat™ LE4476 is a silane crosslinkable natural compound designed for low voltage power cables up to 6kV. The base material Visico™ LE4421 in combination with the catalyst masterbatch Ambicat™ LE4476 will accelerate the moisture-induced crosslinking reaction. The system is highly active and crosslinks quickly at ambient conditions, in sauna or in hot water. When properly mixed, addition of 5 parts of Ambicat™ LE4476 to 95 parts of Visico™ LE4421 , insulation with excellent thermo-oxidative stability, also in contact with copper as well as aluminum, is achieved. If the insulation is designed to meet the thermo-oxidative ageing demand requiring by IEC 60502 at 150°C in contact with copper, addition of 9 parts Ambicat™ LE4476 to Visico™ LE4421 is recommended. Applications: insulation of low voltage cables for the range up to 6 kV. Additives: Visico™ LE4421 / Ambicat™ LE4476 contains antioxidant, metal deactivator and a drying agent. Visico™ LE4421 contains a permanent scorch retardant additive, ensuring safe processing and enabling the use of a highly active crosslinking catalyst. Specifications: Visico™ LE4421 / Ambicat™ LE4476 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure: ASTM D 1248 Type I, Class A, Category 4; HD 603 S1; HD 604 S1; IEC 60502-1; NEMA WC 70; and NEMA WC 71. Information provided by Borealis AG

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Borealis-VisicoAmbicat-LE4421LE4476-Polyethylene-Compound-Crosslinkable.php](http://www.lookpolymers.com/polymer_Borealis-VisicoAmbicat-LE4421LE4476-Polyethylene-Compound-Crosslinkable.php)

| Physical Properties                   | Metric                                               | English                                              | Comments                         |
|---------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------------|
| Density                               | 0.923 g/cc                                           | 0.0333 lb/in <sup>3</sup>                            | ISO 1183/ISO 1872-2              |
| Environmental Stress Crack Resistance | >= 96 hour<br>@Temperature 50.0 °C                   | >= 96 hour<br>@Temperature 122 °F                    | Igepal 10%, F20; IEC 60811-4-1/B |
| Melt Flow                             | 1.0 g/10 min<br>@Load 2.16 kg,<br>Temperature 190 °C | 1.0 g/10 min<br>@Load 4.76 lb,<br>Temperature 374 °F | ISO 1133                         |

| Mechanical Properties     | Metric       | English     | Comments                                              |
|---------------------------|--------------|-------------|-------------------------------------------------------|
| Hardness, Shore D         | 52           | 52          | 1s; ISO 868                                           |
| Tensile Strength at Break | <= 10.5 MPa  | <= 1520 psi | after aging 168h, 150°C, 9% catalyst); IEC 60811-1-2  |
|                           | <= 11.25 MPa | <= 1632 psi | after aging (240h, 135°C, 5% catalyst); IEC 60811-1-2 |
|                           | >= 15.0 MPa  | >= 2180 psi | 250mm/min; ISO 527                                    |
| Elongation at Break       | >= 300 %     | >= 300 %    | 250mm/min; ISO 527                                    |

| Thermal Properties      | Metric      | English    | Comments  |
|-------------------------|-------------|------------|-----------|
| Brittleness Temperature | <= -76.0 °C | <= -105 °F | ASTM D746 |

| Thermal Properties  | Metric                         | English                        | Comments  |
|---------------------|--------------------------------|--------------------------------|-----------|
| Volume Resistivity  | >= 1.00e+6 ohm-cm              | >= 1.00e+6 ohm-cm              | IEC 60093 |
| Dielectric Constant | 2.3<br>@Frequency 50000 Hz     | 2.3<br>@Frequency 50000 Hz     | IEC 60250 |
| Dielectric Strength | >= 22.0 kV/mm                  | >= 559 kV/in                   | IEC 60243 |
| Dissipation Factor  | 0.00050<br>@Frequency 50000 Hz | 0.00050<br>@Frequency 50000 Hz | IEC 60250 |

| Processing Properties | Metric     | English    | Comments |
|-----------------------|------------|------------|----------|
| Zone 1                | 150 °C     | 302 °F     |          |
| Zone 2                | 170 °C     | 338 °F     |          |
| Zone 3                | 170 °C     | 338 °F     |          |
| Zone 4                | 170 °C     | 338 °F     |          |
| Die Temperature       | 170 °C     | 338 °F     |          |
| Shelf Life            | 15.0 Month | 15.0 Month |          |

| Descriptive Properties | Value | Comments                                             |
|------------------------|-------|------------------------------------------------------|
| Hot Set Test, %        | 0     | 200°C, 0.2 MPa; IEC 60811-2-1; Permanent Deformation |
|                        | 60    | 200°C, 0.2 MPa; IEC 60811-2-1; Elongation under load |

## Contact Songhan Plastic Technology Co.,Ltd.

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