ECCOH™ LSFOH 6153/6154 UV Formulations
Improved processing speeds & greater gel resistance for optical fiber cables

ECCOH™ LSFOH 6153 UV and 6154 UV grades are low smoke, fume, non-halogen material solutions for optical fiber cables with increased processing speeds and greater resistance to chemicals such as gel water blocking compounds, used to protect optical fibers.

VALUE
ECCOH LSFOH grades can run at high processing speeds of up to 1,000 m/min and, with a much lower melting temperature than PBT alternatives, can greatly enhance manufacturing efficiency. They also enable lower wall thickness, reducing raw material used in production.

They offer greater gel resistance, reducing migration over time and expanding the lifetime value of the cable. With good colour rendition, they make identification of tubes or tight buffers easier during installation.

KEY CHARACTERISTICS
- Faster processing speeds (up to 1,000 m/min) at low wall thickness (100 µm)
- Increased chemical resistance
- Lower gel migration
- ECCOH 6153 UV - optimized for Teroson
- ECCOH 6154 UV - optimized for Unigel
- High color rendition and compatibility with Avient masterbatch
- High UV resistance
- Very low shrinkage

MARKET & APPLICATIONS
Optical Fiber Cables including:
- Stranded loose tubes – gel-filled/dry
- Micro-modules
- Tight buffer applications – gel-filled/dry

STANDARD COMPLIANCE
- IEC 60794
- NF XP C93-850-1-1:2020
- EN 50289-4-17:2016
- ISO 4892:2016
- ST/CNET/5843 (1998)
GEL MIGRATION PERFORMANCE

ECCOH LSFOH 6153/6154 UV grades offer greater gel migration performance compared to alternative ECCOH grades.

<table>
<thead>
<tr>
<th>Gel Compound</th>
<th>ECCOH™ 6151*</th>
<th>ECCOH™ 6153 UV</th>
<th>ECCOH™ 6154 UV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unigel</td>
<td>Average</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Teroson</td>
<td>Average</td>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>Itcogel</td>
<td>Average</td>
<td>Good</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Gel migration is measured using a quantitative internal method
* 6151 can be supplied with UV protection

RHEOLOGICAL PERFORMANCE

ECCOH 6153/6154 UV grades offer enhanced rheological behavior. Performing at a lower pressure and with less stress enables a smoother surface finish and can increase processing speeds by up to 15% compared to alternative grades.

<table>
<thead>
<tr>
<th></th>
<th>ECCOH™ 6151</th>
<th>ECCOH™ 6153 UV</th>
<th>ECCOH™ 6154 UV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔP (bars)</td>
<td>101</td>
<td>63</td>
<td>60</td>
</tr>
<tr>
<td>Shear Rate (1/s)</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Stress (kPa)</td>
<td>127</td>
<td>79</td>
<td>75</td>
</tr>
</tbody>
</table>

* Values concluded from the simulation of materials rheological data and modelling standard extrusion tooling

**Pressure:** can affect extruder performance, higher pressure gives a lower output at the same rpm

**Shear rate:** has a relation with self-cleaning of the walls and mixing conditions

**Stress:** can affect the surface of the product, less stress gives a better surface aspect

Application example:
Gel-filled stranded loose tube optical fiber cable

www.avient.com

Copyright © 2020, Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as “typical” or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the information. Avient makes no warranties or guarantees respecting suitability of either Avient’s products or the information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the information and/or use or handling of any product. AVIENT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the information or products reflected by the information. This literature shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.