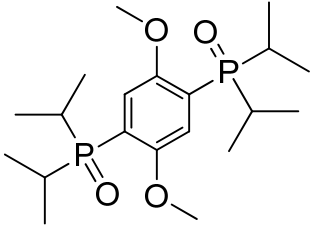


|                     |  |
|---------------------|--|
| <b>Description</b>  | (2,5-dimethoxy-1,4-phenylene)bis(diisopropylphosphine oxide)                       |
| <b>CAS</b>          | 1426397-81-0   |
| <b>Formula</b>      | C <sub>20</sub> H <sub>36</sub> O <sub>4</sub> P <sub>2</sub>                      |
| <b>FW</b>           | 402.44   |
| <b>LOT #</b>        | KP03006  |
| <b>Purity</b>       | 99.96%   |
| <b>Batch Size</b>   | 115 g  |
| <b>Manufactured</b> | 10/15/2013   |
| <b>Structure</b>    |  |

| Analysis             | Method  | Results                       | Analysis By: |
|----------------------|---|-------------------------------|--------------|
| <b>HPLC</b>          | Agilent Eclipse Plus C18, 3.5 um, 4.6x100, UV 225, water/ACN gradient                                 | 99.96%                        | K. Pupek     |
| <b>GC/MSD</b>        | Agilent 7890A/5975C Triple-Axis<br>Agilent HP-5MS, 0.25 um, 30m x 0.250 mm, 45 to 300 deg, 30 deg/min | 99.9%<br>M <sup>+</sup> = 402 | K. Pupek     |
| <b>Melting Point</b> | Automatic, range method (Buchi M-565)   | 255-267°C                     | K. Pupek     |
| <b>NMR</b>           | Bruker 500 MHz, CDCl <sub>3</sub> solution; <sup>1</sup> H, <sup>13</sup> C, <sup>31</sup> P          | Consistent with Structure     | T. Dzwiniel  |

| Properties  | Value |
|---|-------|
| <b>Redox Potential (vs Li+/Li)</b>  | 4.55  |
| <b>Solubility in Electrolyte (1.2M LiPF<sub>6</sub> EC/EMC (3/7 V/V))</b> | 1 M   |