**Technical Data Sheet**

18:1 DGPP Dioleoylglycerol Pyrophosphate (ammonium salt)

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Physical state</th>
<th>Purity</th>
<th>Transition temp.</th>
<th>CAS</th>
<th>CMC</th>
<th>Synonyms</th>
<th>Molec. Formula</th>
<th>TLC mobile phase</th>
<th>MW</th>
<th>Exact Mass</th>
<th>Percent composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>810811</td>
<td>Powder</td>
<td>&gt; 95%</td>
<td>No data</td>
<td>474943-14-1</td>
<td></td>
<td>DiC18:1 DGPP; long chain DGPP; diacylglycerol pyrophosphate</td>
<td>C₃₉H₈₀N₂O₁₁P₂</td>
<td>C:Acetone:M:Acetic Acid:W*, 50:15:13:12:4, v/v; TLC plate sprayed with 1% Potassium Oxalate</td>
<td>815.020</td>
<td>814.524</td>
<td>C 57.47% H 9.89% N 3.44% O 21.59% P 7.60%</td>
</tr>
</tbody>
</table>

**Stability**
Store in <-20°C freezer for up to six months (powder only). Stable in solution for 1-2 days at <-20°C as DiC18:1 DGPP immediately starts to break down into phosphatidic acid.

**Solubility**
Soluble in chloroform at 25 mg/mL. Insoluble in water.

*chloroform:acetone:methanol:acetic acid:water

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**Description:** DGPP is produced by the phosphorylation of phosphatidic acid (van Schooten et al, 2006) and has been found in plants (Munnik et al, 1996; Zalejski et al, 2006), *Saccharomyces cerevisiae* (Carman, 1997), and *Escherichia coli* (Carman, 1997). DGPP has been shown to be a phospholipid second messenger in abscisic acid signaling, a novel signaling pathway (van Schooten et al, 2006; Zalejski et al, 2006). This role may be important in triggering homeostatic cellular responses (Balboa et al, 1999).

**Product use:**
DiC18:1 DGPP is added to a test tube as a chloroform solution and the solvent is removed (for more information on how to remove the solvent, see technical information on Avanti’s website). Add 0.5% Tergitol detergent solution and add to cells.

Biological application- “I am not sure how well the long chain DGPP is taken up in yeast cells, that is why we synthesized the DiC8 compound. We only use the long chain compound as a standard for TLC, HPLC and for DGPP phosphatase assays.

Storage conditions- Store concentrated (~25 mg/mL) in chloroform. Concentrations below 10 mg/mL are not as stable.” Personal communication, George M. Carman, Sept. 1999.

**References:**

**Related Products:** DGPP

**MSDS:** see www.avantilipids.com for product number 810811