

## BASF Palatinol® 11P-E (DUP) Linear Phthalate

Category : Other Engineering Material , Additive/Filler for Polymer

### Material Notes:

Formula: C30H50O4 Description: Palatinol® 11P-E plasticizer is a linear phthalate ester based on a predominately linear C11 alcohol.

Palatinol 11P-E exhibits very low volatility and good processing characteristics with vinyl resin. Its viscosity is relatively low in relation to its molecular weight. Palatinol 11P-E is inhibited with 0.1% by weight of 1,1,3-tris(2-methyl-4-hydroxy 5-t butylphenyl)

butane. Applications: Vinyl resin compounders choose Palatinol 11P-E over DTDP for its lower viscosity, greater resin compatibility, faster dry blending and superior efficiency. When formulated to equal concentrations, Palatinol 11P-E provides equal electrical properties in 90°C and 105°C wire insulation compounds. With its lower viscosity, high thermal resistance, permanence and low volatility, Palatinol 11P-E is well suited for demanding applications such as automotive interior (instrument panel skins), building wire insulation, 90° THW and 105° THW, automotive wire harness and vinyl roofing membrane. Information provided by BASF

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Palatinol-11P-E-DUP-Linear-Phthalate.php](http://www.lookpolymers.com/polymer_BASF-Palatinol-11P-E-DUP-Linear-Phthalate.php)

| Physical Properties | Metric                | English                | Comments   |
|---------------------|-----------------------|------------------------|------------|
| Density             | 0.948 - 0.955 g/cc    | 0.0342 - 0.0345 lb/in³ | ASTM D4052 |
| Solubility of Water | 0.0015 %              | 0.0015 %               |            |
| Solubility in Water | <= 1.0e-6 %           | <= 1.0e-6 %            |            |
| Viscosity           | 27 cP                 | 27 cP                  | Absolute   |
|                     | @Temperature 40.0 °C  | @Temperature 104 °F    |            |
|                     | 71 cP                 | 71 cP                  | Absolute   |
|                     | @Temperature 20.0 °C  | @Temperature 68.0 °F   |            |
|                     | 255 cP                | 255 cP                 | Absolute   |
|                     | @Temperature 0.000 °C | @Temperature 32.0 °F   |            |
| Molecular Weight    | 474 g/mol             | 474 g/mol              |            |
| Vapor Pressure      | <= 0.000800 bar       | <= 0.600 torr          |            |

| Mechanical Properties | Metric         | English            | Comments                                               |
|-----------------------|----------------|--------------------|--------------------------------------------------------|
| Hardness, Shore A     | 76             | 76                 | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D 2240 |
|                       | @Time 15.0 sec | @Time 0.00417 hour |                                                        |
|                       | 88             | 88                 | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D 2240 |
|                       | @Time 15.0 sec | @Time 0.00417 hour |                                                        |
|                       | 93             | 93                 | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D 2240 |

| Mechanical Properties | @Time 15.0 sec<br>Metric         | @Time 0.00417 hour<br>English      | Comments                                              |
|-----------------------|----------------------------------|------------------------------------|-------------------------------------------------------|
| Tensile Strength      | 14.8 MPa                         | 2150 psi                           | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D638  |
|                       | 18.5 MPa                         | 2680 psi                           | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D638  |
|                       | 20.6 MPa                         | 2990 psi                           | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D638  |
| Elongation at Break   | 255 %                            | 255 %                              | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D638  |
|                       | 285 %                            | 285 %                              | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D638  |
|                       | 325 %                            | 325 %                              | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D638  |
| 100% Modulus          | 0.00793 GPa                      | 1.15 ksi                           | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D638  |
|                       | 0.0121 GPa                       | 1.75 ksi                           | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D638  |
|                       | 0.0165 GPa                       | 2.39 ksi                           | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D638  |
| Torsional Stiffness   | 310 MPa<br>@Temperature -15.0 °C | 45000 psi<br>@Temperature 5.00 °F  | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D1043 |
|                       | 310 MPa<br>@Temperature -30.0 °C | 45000 psi<br>@Temperature -22.0 °F | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D1043 |
|                       | 310 MPa<br>@Temperature -45.0 °C | 45000 psi<br>@Temperature -49.0 °F | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D1043 |

| Thermal Properties      | Metric                | English               | Comments                                             |
|-------------------------|-----------------------|-----------------------|------------------------------------------------------|
| CTE, linear             | 790 µm/m-°C           | 439 µin/in-°F         |                                                      |
| Boiling Point           | 262 °C                | 504 °F                |                                                      |
|                         | @Pressure 1.32e+6 MPa | @Pressure 1.91e+8 psi |                                                      |
| Pour Point              | -9.00 °C              | 15.8 °F               |                                                      |
| Brittleness Temperature | -50.0 °C              | -58.0 °F              | Plasticizer conc. in vinyl film 70 phr;<br>ASTM D746 |
|                         | -42.0 °C              | -43.6 °F              | Plasticizer conc. in vinyl film 50 phr;<br>ASTM D746 |
|                         | -32.0 °C              | -25.6 °F              | Plasticizer conc. in vinyl film 40 phr;<br>ASTM D746 |
| Flash Point             | 254 °C                | 489 °F                |                                                      |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
| Optical Properties | Metric | English | Comments |
| Refractive Index   | 1.481  | 1.481   |          |

| Chemical Properties | Metric  | English | Comments               |
|---------------------|---------|---------|------------------------|
| Total Acid Number   | <= 0.10 | <= 0.10 | [mg KOH/g]; ASTM D1045 |

| Processing Properties | Metric | English | Comments  |
|-----------------------|--------|---------|-----------|
| Moisture Content      | 0.10 % | 0.10 %  | ASTM E203 |

| Descriptive Properties | Value         | Comments           |
|------------------------|---------------|--------------------|
| Color                  | <50           | APAH, ASTM D5386   |
| Composition            | Ester content | >99.6%, ASTM D3465 |

## Contact Songhan Plastic Technology Co.,Ltd.

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