

# Specification

Technical Data Sheet

|                              |                                            |                                          |
|------------------------------|--------------------------------------------|------------------------------------------|
| <b>CAS</b><br><b>81-13-0</b> | <b>STORAGE</b><br><b>2 to 8 &amp;deg;C</b> | <b>MOLECULAR WEIGHT</b><br><b>205.25</b> |
|------------------------------|--------------------------------------------|------------------------------------------|

**PRODUCT****D-Panthenol Ph.Eur.**

|                          |                                                |
|--------------------------|------------------------------------------------|
| <b>Product number</b>    | 90033185                                       |
| <b>CAS number</b>        | 81-13-0                                        |
| <b>Molecular formula</b> | C <sub>9</sub> H <sub>19</sub> NO <sub>4</sub> |
| <b>Molecular weight</b>  | 205.25 g/mol                                   |

| PARAMETER                                                     | SPECIFICATION                                                                  |
|---------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Appearance</b>                                             | Colourless to slightly yellowish, viscous liquid or semi crystalline substance |
| <b>pH</b>                                                     | ≤10.5                                                                          |
| <b>Refractive Index</b>                                       | 1.495 to 1.502                                                                 |
| <b>Water</b>                                                  | ≤1.0 g/100g                                                                    |
| <b>3-Aminopropanol (impurity A) and other amino compounds</b> | ≤1.0 g/100g                                                                    |
| <b>Appearance of Solution</b>                                 | Clear, not more coloured than reference solution B6                            |
| <b>Related substances: Pantoic acid (impurity B)</b>          | ≤ 0.5 g/100g                                                                   |
| <b>Related substances: Pantolactone (impurity C)</b>          | ≤ 1.0 g/100g                                                                   |
| <b>Specific optical rotation</b>                              | +29.0 to +32.0                                                                 |
| <b>Specific Optical Rotation (25 Deg C)</b>                   | +29.0 to +31.5°                                                                |
| <b>Sulphated Ash</b>                                          | ≤0.1 g/100g                                                                    |
| <b>Aminopropanol</b>                                          | ≤1.0 g/100g                                                                    |
| <b>Unknown impurities</b>                                     | max. 0.10 g/100g each                                                          |

|                                |                                                                                                                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SPECIFICATION STATEMENT</b> | The values stated above represent the standard specification for this product, issued under <b>Molekula Ltd</b> 's quality management system. Batch-specific results are provided on the Certificate of Analysis. |
| <b>STORAGE</b>                 | Store as indicated on the product label, away from light, moisture and incompatible materials.                                                                                                                    |

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**Molekula Ltd** would like to thank you for your support of our products and service.

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