

**STANDARD TEST METHODS
OF THE PINE CHEMICAL INDUSTRY**

| PRODUCT | TEST METHOD | ASTM | PCA | ISO | CHINA |
|----------------|------------------------------|-------------|------------|--------------|--------------|
| ROSIN | | | | | |
| | Softening Point, Ring & Ball | E-28 | | ISO 4625-1 | GB 8146-2003 |
| | Softening Point Mettler | D-6090 | | ISO 4625-2 | |
| | Acid Number | D--465 | | | GB 8146-2003 |
| | Rosin Acid Content | D1240 | | | |
| | Fatty Acid Content | D1585 | | | |
| | Unsaponifiables | D-1065 | | | GB 8146-2003 |
| | Insoluble Matter | D269 | | | GB 8146-2003 |
| | Gas Chromatographic Analysis | D5974 | | ISO 19334 | |
| | Grading | D-509 | | ISO/CD 13632 | GB 8145-2003 |
| | Volatile Oil Content | D889 | | | |
| | Water Content | D-890 | | | |
| | Color USDA | D-509 | | | |
| | Color Gardner | D6166 | | ISO 4630-1&2 | |
| | Color Pt Co Scale | | | ISO 6271-1&2 | |

TALL OIL FATTY ACID or DISTILLED TALL OIL

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|------------------------------|-------|
| Saponification Number | D464 |
| Acid Number | D465 |
| Water Content | D890 |
| Unsaponifiable Matter | D1065 |
| Rosin Acid Content | D1240 |
| Fatty Acid Content | D1585 |
| Color Gardner | D1544 |
| Color Instrumental | D6166 |
| Titer | D1982 |
| Iodine Value | D5768 |
| Gas Chromatographic Analysis | D5974 |
| Color After Heating | D1981 |

| PRODUCT | TEST METHOD | ASTM | PCA | ISO | CHINA |
|---------|-------------|------|-----|-----|-------|
|---------|-------------|------|-----|-----|-------|

CRUDE TALL OIL

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|--------------------------------|--|--|--|---------------|--|
| Acid Number | | | | PCTM 1&2 | |
| Water Content | | | | PCTM 4A,4B&4C | |
| Residual Soap | | | | PCTM 13 | |
| Saponification Number | | | | PCTM 16 | |
| Rosin Acid Content | | | | PCTM 17 | |
| Unsaponifiable matter | | | | PCTM 19 | |
| Fatty Acid Content | | | | PCTM 20 | |
| Solvent Insolubles | | | | PCTM 21 | |
| Viscosity | | | | PCTM 26 | |
| Tall Oil in Wood Pulp | | | | PCTM 23 | |
| Tall Oil in Wood Chips | | | | PCTM 25 | |
| Tall Oil in Black Liquor | | | | PCTM 24 | |
| Tall Oil in Tall Oil Soap | | | | PCTM 7 | |
| Lignin in Tall Oil Soap | | | | PCTM 8 | |
| Ash Content of Tall Oil Soap | | | | PCTM 12 | |
| Tall Oil in Spent Acid | | | | PCTM 10 | |
| Mineral Acid in Crude Tall Oil | | | | PCTM 14 | |

TURPENTINE AND ITS FRACTIONS

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|---------------------------------|--|--------|--|---------|--|
| Sampling and Testing Turpentine | | D 233 | | | |
| Testing Dipentene | | D 801 | | | |
| Testing Pine Oil | | D 802 | | | |
| Gas Chromatographic Analysis | | D 6387 | | | |
| Turpentine in Wood | | | | PCTM 25 | |