

Certificate of Analysis

Date of Testing: 2024-01-03 10:00:50
Date of Next Testing: 2028-01-02 10:00:50
Product Name: **TWEEN® 20**
CAS Number: 9005-64-5
Specifications & Purity: viscous liquid
Lot #: L2326213
SKU #: **T104863**
Analysis: **307136**
Storage Temperature: Room temperature

| Parameter | Limit Values | Result |
|------------------------|-----------------------|-----------------------|
| Water by Karl Fischer | 0-3 (%) | 0.63% |
| Acid Value | 0-2.2 (mg/g) | 0.00 mg/g |
| Residual Ethylene | 0-1 (ppm) | 0.00 ppm |
| Dioxane Content | 0-10 (ppm) | 0.00 ppm |
| Hydroxy Value | 96-108 (mgKOH/g) | 98.50 mgKOH/g |
| Viscosity(25 °C, neat) | 275-480 (cP) | 305.00 cP |
| Saponification value | 40-50 (mg/g) | 42.50 mg/g |
| Density (25°C) | 1.08-1.12 | 1.09 |
| Appearance (T104863) | Yellow oily liquid | Yellow oily liquid |
| Infrared spectrum | Conforms to Structure | Conforms to Structure |



John Su
QA & QC Manager