

## Certificate of Analysis

Date of Testing: 2024-12-02 11:09:02

Date of Next Testing: 2028-12-01 11:09:02

Product Name: **TWEEN® 20**

CAS Number: 9005-64-5

Specifications & Purity: viscous liquid

Lot #: K2422219

SKU #: **T104863**

Version: **1**

Analysis #: **420762**

Storage Temperature: Room temperature

| Parameter             | Limit Values          | Result                |
|-----------------------|-----------------------|-----------------------|
| Water by Karl Fischer | 0-3 (%)               | 2.50 %                |
| Acid Value            | 0-2.2 (mg/g)          | 0.26 mg/g             |
| Viscosity(25 °C,neat) | 275-480 (cP)          | 317.00 cP             |
| Saponification value  | 40-50 (mg/g)          | 40.90 mg/g            |
| Density (25°C)        | 1.08-1.12             | 1.10                  |
| Residual Ethylene     | 0-1 (ppm)             | 0.20 ppm              |
| Hydroxy Value         | 96-108 (mgKOH/g)      | 98.30 mgKOH/g         |
| Dioxane Content       | 0-10 (ppm)            | 1.00 ppm              |
| Appearance (T104863)  | Yellow oily liquid    | Yellow oily liquid    |
| Infrared spectrum     | Conforms to Structure | Conforms to Structure |



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