

## Certificate of Analysis

### (Representative Sample Certificate)

**Product Name:** Polysorbate 80  
**INCI Name:** Polysorbate 80  
**CAS Number:** 9005-65-6  
**Lot Number:** Not available (data may vary slightly with different lots or batches)  
**Expiration Date:** 24 months from production date

Property	Specification	Analysis
Identification (IR) (MA-1188)	-	Pass
C14 (Myristic) (MA-1294)	5.0% MAX	0.3%
C16 (Palmitic) (MA-1294)	16.0% MAX	5.9%
C16:1 (Hexadecenoic) (MA-1294)	8.0% MAX	0.5%
C18 (Stearic) (MA-1294)	6.0% MAX	2.0%
C18:1 (Oleic) (MA-1294)	58.0 - 90.0%	74.7%
C18:2 (Linoleic) (MA-1294)	18.0% MAX	0.7%
C18:3 (Linolenic) (MA-1294)	4.0% MAX	1.4%
Oleic Acid Content (C18:1) (MA-1295)	22.0 - 24.0 g/100g	22.1 g/100g
Acid Value (C18:1) (MA-1295)	193.0 - 206.0 mg KOH/g	197.3 mg KOH/g
Iodine Value (C18:1) (MA-1295)	80.0 - 92.0 g I <sub>2</sub> /100g	84.5 g I <sub>2</sub> /100g
Identification (FCC)	-	Pass

**Disclaimer:** This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy themselves as to the suitability & completeness of such information for their own particular use.

(MA-1297)		
Oxyethylene Content (MA-1327)	65.00 - 69.50%	66.10%
1,4 Dioxane (MA-1398)	1.0 ppm MAX	0.0 ppm
Ethylene Oxide (MA-1398)	1.0 ppm MAX	0.1 ppm
Hydroxyl Value (MA-525)	65.0 - 80.0 mg KOH/g	67.8 mg KOH/g
Ignition Residue (MA-612)	0.250 wt% MAX	0.090 wt%
Acid Value (MA-638)	2.0 mg KOH/g MAX	0.5 mg KOH/g
Arsenic (As) (MA-705)	1.0 ppm MAX	1.0 ppm
Lead (Pb) (MA-705)	2.0 ppm MAX	2.0 ppm
Heavy Metals (MA-724)	10.0 ppm MAX	10.0 ppm
pH (5% Aqueous Solution @ 25 °C) (MA-729)	6.0 - 7.0	6.6
Kinematic Viscosity @ 25 °C (MA-766)	300.0 - 500.0	488.5
Peroxide Value (MA-780)	9.0 meq/1000g MAX	0.5 meq/1000g
Specific Weight @ 25 °C (MA-798)	1.060 - 1.090	1.072
Saponification Value (MA-810)	45.0 - 55.0 mg KOH/g	48.7 mg KOH/g
Moisture (MA-875)	3.0% MAX	2.6%
Color (Gardner @ 25 °C) (MA-881)	4.0 MAX	3.8

“Certified in compliance with the terms of the US-Canada Organic Equivalency Arrangement. The above data was obtained using the test indicated and is subject to the deviation inherent in the test method. Results may vary under other test methods or conditions. This report is not to be signed. All data are as per our supplier.

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