

Kalchem International

Chemicals & Compounding Supplies

Castor oil 1

Technical grade

Univar po# HS-862068
GS&E po# 11-411787
Lot number: 1D15
Production date: Apr. 2015
Re-evaluation date: Apr. 2017
Source code: 060-GHA-01
Product code: 807558 (200 kgs ms drum)

Properties	Specifications	Results
Appearance		Yellow viscous clear liquid
Color Gardner	3 max.	2G
Free Fatty Acid (F.F.A.)	1.0% max.	0.35
Acid value	2.0 max.	0.70
Iodine value	83 - 88	85.51
Hydroxyl value	161.6 - 168	163.89
Moisture	0.25% max.	0.14
Saponification value	175 - 185	180.36
Unsaponifiable matter	0.7% max.	0.35
Specific gravity	0.957 - 0.965	0.9572
Viscosity	6.3 - 8.9	7.1

Conclusion: This material meets product specification requirements.

Signed by: Darcy Pratt

Date: May 11, 2015

This document has been reviewed and approved through a secure process by the authorized individual listed above.

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