Castor Oil – Technical Overview

Introduction

This document provides a general technical overview of castor oil parameters commonly referenced in industrial and commercial applications.

All specifications are indicative in nature and may vary based on buyer requirements, application, and contractual agreement.

Typical Technical Parameters

Appearance

Pale yellow to yellowish, clear viscous liquid

Odour

Characteristic mild to distinct odour

Density

0.950 – 0.965 kg/l at 30°C (specific gravity: 0.954 – 0.960 at 30°C)

Viscosity

6.5 – 8.9 stokes at 25°C (or approximately 889 centistokes)

Acid Value

0.7 – 4.0 mg KOH/g (depending on grade; typically 2.0 mg KOH/g max. for traded castor oil)

Moisture Content

0.25 – 0.5% maximum

Purity Level

Insoluble impurities: 0.02% maximum
Refractive Index: 1.470 – 1.474 at 40°C

Additional Key Parameters

Parameter	Specification
Iodine Value	82 – 90 g I_2/100g
Saponification Value	177 – 185 mg KOH/g
Hydroxyl Value	158 – 165 mg KOH/g
Flash Point	>250°C (high thermal stability)
Boiling Point	Approximately 313°C
Solubility	Soluble in alcohols and organic solvents; insoluble in water

Usage Context

Castor oil is commonly used as a base input across various industrial applications including:

- Lubricants and industrial oils
- Pharmaceutical and cosmetic formulations
- Polymers and synthetic materials
- Paints and coatings
- Biodiesel and biofuel production

Specific suitability and specifications are determined based on buyer requirements and intended application.

Availability of Specifications

Detailed specifications, certificates of analysis, and test results are shared upon formal inquiry.

Product testing adheres to established standards such as AOCS (American Oil Chemists' Society), USP (United States Pharmacopeia), Ph. Eur. (European Pharmacopoeia), and other relevant international standards.

⚠ DISCLAIMER (MANDATORY)

This document is for general reference only and does not constitute a specification sheet, certificate of analysis, or product guarantee.

Final specifications are subject to mutual agreement and official documentation.

All parameters listed are indicative and may vary based on source, processing method, storage conditions, and intended application. Buyers are advised to request certificates of analysis and formal specification sheets from suppliers prior to procurement.

For regulatory compliance, application-specific requirements, or detailed technical data, please contact the supplier directly for comprehensive documentation.