



VISCOSITY TIPS & CONVERSION GUIDE FOR TORONVISC™ USERS

Understanding viscosity units and the behavior of various fluids is critical for choosing the right viscometer. This guide offers a clear overview of common unit conversions, viscosity classifications, and typical fluid viscosities to help you select the most suitable ToronVisc™ Series Viscometer for your application.

APPLICATIONS

Common Dynamic Viscosity Unit Conversion

Unit System	Unit	Pa·s	mPa·s	P (Poise)	cP (centipoise)
SI	Pa·s	1	1000	10	1000
	mPa·s	0.001	1	0.01	1
CGS	P	0.1	100	1	100
	cP	0.001	1	0.01	1

Conversion Notes:

- 1 Pa·s = 1000 mPa·s = 1000 cP = 10 Poise
- 1 cP = 1 mPa·s
- 1 P = 100 cP
- 1 Pa·s = 10 P
- 1 MPa·s = 1,000,000 cP

Dynamic vs. Kinematic Viscosity

Dynamic viscosity (η) is related to kinematic viscosity (ν) and fluid density (ρ):

- $\eta = \nu \times \rho$
- $\nu = \eta / \rho$

Use this relationship to convert between the two, particularly when measuring or comparing fluid flow under gravity.

Classification of Fluids

Fluids are broadly classified into:

- Newtonian Fluids: Maintain a constant viscosity regardless of shear rate (e.g., water, oils).
- Non-Newtonian Fluids: Viscosity changes with shear rate. These are divided into:
 - Shear-rate dependent: e.g., paint, ketchup, glue
 - Time-dependent: e.g., thixotropic materials

Selecting the right ToronVisc™ model depends on whether you're testing Newtonian or non-Newtonian fluids.

Common Fluid Viscosities

Viscosities are expressed in centipoise (cP), where 1 cP = 1 mPa·s:

Fluid	Viscosity (cP)
Water	1 cP
Milk	3.2 cP
Cream	16.5 cP

Fluid	Viscosity (cP)
Vegetable Oil	34.6 cP
Ketchup	176 cP
Glycerin	880 cP
Molasses	1760 cP
Glue	3000 cP
Syrup	8640 cP
Sour Cream	15,200 cP

This table can help estimate which ToronVisc™ model (E-Series, T-Series, PDV-Series, etc.) is most appropriate for your material.

Need Help Choosing a Viscometer?

Our technical team is available to guide you in selecting the ideal ToronVisc™ viscometer based on your fluid type, viscosity range, and testing needs. Contact us for expert assistance or visit our [product comparison page](#).



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 🇨🇦

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 🇺🇸

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 🇦🇪

Phone: +971 488 19252
Email: me@torontech.com

