

# ISO 1628-1:2024-12 (E)

## Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 1: General principles

---

<b>Contents</b>		<b>Page</b>
Foreword.....		iv
Introduction.....		v
<b>1</b>	<b>Scope.....</b>	<b>1</b>
<b>2</b>	<b>Normative references.....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions.....</b>	<b>1</b>
	3.1 Terms related to any liquid.....	1
	3.2 Terms related to polymer solutions.....	2
<b>4</b>	<b>Principle.....</b>	<b>3</b>
	4.1 General.....	3
	4.2 Method A — Efflux time method.....	4
	4.3 Method B — Differential pressure method.....	4
<b>5</b>	<b>Apparatus.....</b>	<b>5</b>
	5.1 Efflux time method.....	5
	5.2 Differential pressure method.....	8
<b>6</b>	<b>Solutions.....</b>	<b>9</b>
	6.1 Preparation.....	9
	6.2 Concentration.....	9
<b>7</b>	<b>Temperature of measurement.....</b>	<b>10</b>
<b>8</b>	<b>Procedure.....</b>	<b>10</b>
	8.1 Efflux time method.....	10
	8.1.1 General.....	10
	8.1.2 Preparing and charging the viscometer.....	10
	8.1.3 Efflux time measurement.....	10
	8.2 Differential pressure method.....	11
	8.2.1 General.....	11
	8.2.2 Collection of viscosity ratio increment signal.....	11
<b>9</b>	<b>Expression of results.....</b>	<b>12</b>
	9.1 Reduced viscosity and intrinsic viscosity.....	12
	9.2 <i>K</i> -value.....	14
<b>10</b>	<b>Test report.....</b>	<b>14</b>
	<b>Annex A (informative) Efflux time method — Notes on sources of error.....</b>	<b>16</b>
	<b>Annex B (informative) Differential pressure method — Notes on sources of error.....</b>	<b>20</b>
	<b>Annex C (normative) Efflux time method — Cleaning of apparatus.....</b>	<b>22</b>
	<b>Bibliography.....</b>	<b>23</b>