## ISO 4625-1:2020 (E)

## Binders for paints and varnishes — Determination of softening point — Part 1: Ring-and-ball method

## Contents

Foreword

Introduction

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Principle
- 5 Sampling and preparation of test pieces
  - 5.1 Sampling
  - 5.2 Preparation of test pieces by the pour method
  - 5.2.1 Field of application
  - 5.2.2 Apparatus
  - 5.2.3 Procedure
  - 5.3 Preparation of test pieces from samples with a low softening point (up to 35 °C)
  - 5.3.1 Apparatus
  - 5.3.2 Procedure
- 6 Materials (heating-bath liquids)
- 7 Automated ring-and-ball method (reference method)
  - 7.1 Apparatus
  - 7.2 Calibration
  - 7.3 Procedure for materials with a softening point between 35 °C and 80 °C
  - 7.4 Procedure for materials with a softening point between 80 °C and 150 °C
  - 7.5 Procedure for materials with a softening point above 150 °C
- 8 Manual ring-and-ball method (alternate method)
  - 8.1 Apparatus
  - 8.2 Calibration
  - 8.3 Procedure
  - 8.3.1 Procedure for materials with a softening point between 35 °C and 80 °C
  - 8.3.1.1 Assembly of apparatus
  - 8.3.1.2 Heating
  - 8.3.1.3 Determination of softening point
  - 8.3.2 Procedure for materials with a softening point between 80 °C and 150 °C
  - 8.3.3 Procedure for materials with a softening point above 150 °C
  - 8.3.4 Procedure for materials with a softening point below 35 °C
- 9 Expression of results
- 10 Precision and bias
  - 10.1 Precision of the automated method
  - 10.1.1 General
  - 10.1.2 Precision data
  - 10.2 Precision of the manual method
  - 10.2.1 General
  - 10.2.2 Precision data
  - 10.3 Bias
- 11 Test report