Australian Standard™

Methods of test for elastomers

Method 14.1: Adhesive strength of vulcanized or thermoplastic rubber—One-plate method

PREFACE

This Standard was prepared by the Standards Australia Committee RU-003, Analysis and Testing of Elastomers to supersede AS 1683.14.1—1992, *Methods of test for elastomers,* Method 14.1: *Rubber, vulcanized—Determination of adhesion to metal—One-plate method.*

The objective of this Standard is to provide manufacturers and users of elastomeric materials with a method for the determination of the adhesive strength of a vulcanized or thermoplastic rubber bonded to a rigid substrate.

This Standard is identical with and has been reproduced from ISO 813:1997, *Rubber vulcanized or thermoplastic—Determination of adhesion to a rigid substrate –90° peel method.*

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

As this Standard is reproduced from an international Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text, 'this International Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to international Standards should be replaced by equivalent Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
471	Rubber—Temperatures, humidities and times for conditioning and testing	1683 1683.20	Methods of test for elastomers Method 20: Standard temperatures, humidities and times for conditioning and testing
3383	Rubber—General directions for achieving elevated or subnormal temperatures for test purposes	—	
4664	Rubber, vulcanized or thermoplastic—Determination of dimensions of test pieces and products for test purposes	—	
5893	Rubber and plastics test equipment—Tensile, flexural and compression types (constant rate of traverse)—Description	—	

NOTES

1 Scope

This International Standard specifies a method for the determination of the adhesive strength of a vulcanized or thermoplastic rubber bonded to a rigid substrate, using a test piece comprising a strip of rubber bonded to a single plate of rigid material

The method is applicable primarily to test pieces prepared in the laboratory under standard conditions, such as may be used to provide data for the choice of rubber compounds or adhesive systems, the development of such materials and the control of manufacturing processes.

NOTE — This method is not suitable for high-hardness rubbers.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 471:1995, *Rubber — Temperatures, humidities and times for conditioning and testing.*

ISO 3383:1985, *Rubber — General directions for achieving elevated or subnormal temperatures for test purposes.*

ISO 4648:1991, *Rubber vulcanized or thermoplastic — Determination of dimensions of test pieces and products for test purposes.*

ISO 5893:1993, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Description.*

3 Principle

The force required to cause separation of a strip of rubber bonded to a rigid substrate is measured, the angle of separation being 90° and the width and thickness of the rubber and the rigid material being fixed within specified limits.