

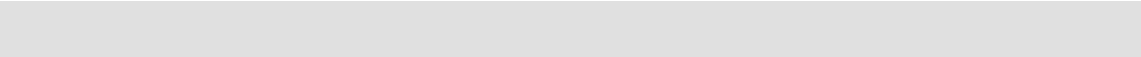


## **Specific Accreditation Criteria**

### **Manufactured Goods ISO/IEC 17025 Annex**

#### **Testing of rubber and plastic products**

**January 2018**



**© Copyright National Association of Testing Authorities, Australia 2013**

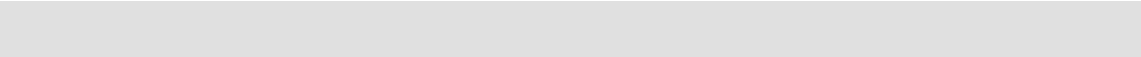
This publication is protected by copyright under the Commonwealth of Australia Copyright Act 1968.

NATA's accredited facilities or facilities seeking accreditation may use or copy this publication or print or email this publication internally for accreditation purposes.

Individuals may store a copy of this publication for private non-commercial use or copy a reasonable portion of this publication in accordance with the fair dealing provisions in Part III Division 3 of the Copyright Act 1968.

You must include this copyright notice in its complete form if you make a copy of this publication.

Apart from these permitted uses, you must not modify, copy, reproduce, republish, frame, upload to a third party, store in a retrieval system, post, transmit or distribute this content in any way or any form or by any means without express written authority from NATA.



## Testing of Rubber and Plastic products

This document provides interpretative criteria and recommendations for the application of ISO/IEC 17025 for both applicant and accredited facilities conducting testing of rubber and plastic products.

Applicant and accredited facilities must also comply with ISO/IEC 17025 and the NATA ISO/IEC 17025 Standard Application Document (SAD).

The clause numbers in this document follow those of ISO/IEC 17025 but since not all clauses require interpretation the numbering may not be consecutive.

### Accelerated air ageing of rubber

Where it is not clear that the ventilation rate requirement of the method is satisfied, reports must either:

- a) note the variation from the required ventilation rate; or
- b) note that the ventilation rate is not known.

### Weatherometers

Some weatherometers are equipped with spray nozzles which are not fully compliant with ASTM G155. Facilities using models which do not fully comply must identify the model used on test reports when reporting tests.

### 5.5.2 Common equipment performance checks

Facilities are responsible for establishing their own equipment assurance program. This is to ensure that all equipment used satisfies the need to produce consistent and reliable and where appropriate traceable results. In doing so facilities must ensure that where methods writing bodies have included equipment calibration and checking intervals in standard methods that these intervals must be followed if the methods are covered by the accreditation. Facilities should refer to the guidance documents available for equipment (NATA's *General Equipment Table*) for further information on calibrations and checks on equipment.

The following supplementary information pertains to equipment items having specific application to rubber and plastics testing and may not be directly described within NATA's *General Equipment Table*.

Item of equipment	Calibration interval (years)	Checking interval (months)	Procedures and references
<b>Cutting dies</b>			
			Depends on standard. Some require the specimen to be measured, others specify die dimensions.
	Initial		Full dimensional check whenever sharpened (where die dimensions are specified).

Item of equipment	Calibration interval (years)	Checking interval (months)	Procedures and references
		Frequent	Check for damage.
<b>Differential scanning calorimeter</b>	0.5		Temperature calibration using high purity indium and tin standards. ISO 11357-6 reference metals. The melting points specified for these materials must be accompanied by evidence of measurement traceability to national or international temperature measurement standards.
<b>Hardness testers</b>			
Deadweight for rubber	3		
Deadweight for plastics	3		
Durometers for rubber	1		Dimensional calibration.
		6	Against rubber hardness test blocks. AS 1683.15.2
<b>Impact testing machines</b>			
Charpy and Izod impact testers	1 (partial)		AS 1146.3
	5 (complete)		
<b>Melt flow index</b>	5		Calibrate masses.
	5		Dimensions of plunger etc.
	1		Orifice dimensions.
		6	Use a known secondary standard to check for any time dependent changes.
<b>Rubber hardness test blocks</b>			
	*2		Against a dead load IRHD hardness tester.
		6	Store lightly dusted with talc, in a covered wooden container away from light, heat, oil and grease.
<b>Thickness gauges (for compressible materials)</b>			
	2		Dial gauge, dimensions and pressure of foot
<b>Weatherometer</b>	Initial		Verify all variable parameters against setting (e.g. temperature, humidity).

\*Commonly conducted by laboratory staff

## References

This section lists publications referenced in this document. The year of publication is not included as it is expected that only current versions of the references shall be used.

### Standards

AS 1146.3	<i>Methods for impact tests on plastics - Calibration of the testing machine</i>
AS 1683.15.2	<i>Methods of test for elastomers - Durometer hardness</i>
AS 2853	<i>Enclosures - Temperature-controlled - Performance testing and grading</i>
ISO 11357-6	<i>Plastics - Differential scanning calorimetry (DSC) - Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)</i>

ASTM G155 - 05a                      *Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials*

## Amendment Table

The table below provides a summary of changes made to the document with this issue.

<b>Section or Clause</b>	<b>Amendment</b>
New Document	<p>This document represents a direct adoption of the former Mechanical Testing Annex E – Rubber and plastics. The technical content is unchanged.</p> <p>The document has been reviewed and updated to reflect the new accreditation criteria documentation structure.</p>