

---

---

**Pyrotechnic articles — Pyrotechnic  
articles for vehicles —**

**Part 2:  
Test methods**

*Articles pyrotechniques — Articles pyrotechniques pour véhicules —  
Partie 2: Méthodes d'essai*



Reference number  
ISO 14451-2:2013(E)



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Test methods</b> .....	<b>1</b>
4.1 Verification of design and documentation.....	1
4.2 Drop test.....	2
4.3 Vibration and temperature test.....	3
4.4 Thermal humidity cycling test.....	5
4.5 Electrostatic discharge (ESD) test.....	6
4.6 Fire test.....	10
4.7 Igniter test.....	12
4.8 Tank test.....	12
4.9 Functioning test.....	13
<b>5 Recording</b> .....	<b>13</b>
<b>Annex A (normative) Definition of temperature build-up time, <math>t_e</math></b> .....	<b>14</b>
<b>Annex B (normative) Probit test (PBBS test)</b> .....	<b>16</b>
<b>Annex C (normative) Bruceton method</b> .....	<b>22</b>
<b>Bibliography</b> .....	<b>25</b>