



September 27, 2012

Vicsa Safety S.A.  
Casa Matriz  
Pintor Cicarelli  
683-SAN JOAQUÍN  
SAN  
CHILI

Intertek Test Report Number: G100766457CRT-110

Dear Claudio Martinez Muratsuka:

Intertek has completed the evaluation of your Spy Flex Safety Spectacles with Clear Lenses, manufactured by Vicsa Safety S.A. to the Rating of Z87+. The Safety Spectacles were evaluated to the requirements of American National Standard for Occupational and Educational Personal Eye and Face Protection Devices, ANSI/ISEA Z87.1-2010. The test samples were received on 8/16/12 in new condition. The evaluations were performed at Intertek in Cortland, NY on 9/18/12 through 9/26/12. The results of these tests are as indicated below.

<b>Sample(s) provided for Evaluation:</b> 20 pairs of Safety Spectacles
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<u>Tests Completed:</u>	<u>Test Date(s):</u>	<u>Section</u>	<u>Results</u>
General Requirements (All Protectors)	9/18/12-9/26/12	5	PASS
Impact Protector Requirements (Z87+)	9/18/12-9/26/12	6	PASS
Droplet and Splash, Dust, and Fine Dust Protector Requirements	N/A	8	N/A

**NOTE: See Pages 3-7 for the representative data sheets for the product evaluated.**

This test report concludes the work for your project outlined under Intertek Quote No: 500380131. If there are any questions regarding this report please contact the undersigned at 607-753-6711.

Tested by:

Erik Sprague  
Associate Engineer  
Performance Group

Reviewed by:

Sara Ensign  
Technician I  
Performance Group



An independent organization testing for safety, performance, and certification.

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**Intertek, Inc.**

3933 US Route 11, Cortland, NY 13045 USA  
Telephone: +1 607-753-6711 Fax: +1 607-756-9891 Web: www.intertek.com

**INTERTEK TEST DATA SHEETS**

Client: Vicsa Safety SA Engineer: Erik Sprague  
 Job No.: G100766457 Tested By: Erik Sprague Date: 9/18/12-9/26/12  
 Product: Spectacles Reviewed By: Sara Ensign Date: 9/27/12  
 Model No.: Spy Flex Standard: ANSI/ISEA Z87.1-2010  
 Description: Safety Spectacles with clear lenses

Sample Control Number: **2012-06-250592; 2012-08-253704; 2012-08-253705** **TRANSCRIBED TEST DATA**

Type:	Spectacle: X	Goggle:	Faceshield:	WH Lenses:	FF Respirator:	Removable:
Style:	Plano: X	Rx:	Photochromatic:	Tinted:	Clear: X	Non-Removable: X

Table of Contents:				
Required:	Page(s):	Section:	Test Description:	Pass/Fail:
(X)	1-7	N/A	Intertek Report No: G100766457CRT-110	N/A
(X)	2	N/A	Table of Contents	N/A
(X)	2	N/A	Equipment List	N/A
(X)	3-5	5	General Requirements (all protectors)	PASS
(X)	5-7	6	Impact Protector Requirements (Z87+)	PASS

Equipment List:					
Used:	Equipment:	Manufacturer:	Model No.:	Control No.:	Cal. Due Date:
(X)	Headform	Inspec	EN 168:2001 Medium Head (50 <sup>th</sup> percentile adult male)	N/A	N/A
(X)	Headform	Inspec	"H" Head	NA	N/A
(X)	6-inch scales	Fowler	52-389-006	N1273	4/23/13
(X)	Gram Scale	Denver Inst	DI-4K	S132	11/11/12
(X)	Calipers	Mitu	0-6"	N1217	5/30/13
(X)	Tape Measure	Craftsman	939392	N766	11/22/12
(X)	Thermocouple / Meter / Rod	Newport	HHM290/N	M218	12/14/12
(X)	Balance/Scale	Denver Instruments	MXX-612	S295	9/14/12
(X)	High Mass Impactor (pointed projectile)	Intertek	Z87-2010 High Mass	J143	12/14/12
(X)	Air Cannon	Basic Eng	HVIT	N740	8/3/13
(X)	Ventilation Probe	Intertek	1.5mm x 125mm	J154	8/3/13
(X)	Needle Penetrator	Intertek	Z87-2010 Penetrator	J174	N/A
(X)	Drop Ball	Intertek	Z87-2010 Drop Ball	J147	2/10/13

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**Section 5, General Requirements (All Protectors)**

Section (Test)	Requirement	Results	Compliance																								
5	General Requirements (All Protectors)																										
5.2	Physical Requirements:  Protectors shall be free from projections, sharp edges or other defects which are likely to cause discomfort or injury during use.	<table border="1"> <tr> <td>Sample #</td> <td align="center">1</td> </tr> <tr> <td align="center" colspan="2">Physical Defects</td> </tr> <tr> <td align="center" colspan="2">NO</td> </tr> </table>	Sample #	1	Physical Defects		NO		PASS																		
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5.2.1 (9.6)	Drop Ball Impact Resistance:  The protector lenses shall not fracture when impacted by a steel ball. A complete device shall fail if any of the following occurs: piece fully detached from inner surface, fracture, penetration of the rear surface, or lens not retained	<table border="1"> <tr> <th align="center" colspan="3">Laboratory Conditions:</th> </tr> <tr> <td>Req'd:</td> <td>Temperature Range 18-28 °C (65-82 °F)</td> <td>Humidity Range 35-65 %</td> </tr> <tr> <td>Actual:</td> <td align="center">71°</td> <td align="center">49%</td> </tr> </table> <table border="1"> <tr> <th>Sample 9.6:</th> <th>Impact eye Location</th> <th>Fracture, penetration, etc</th> </tr> <tr> <td>(1)</td> <td>Left</td> <td align="center">NO</td> </tr> <tr> <td>(2)</td> <td>Left</td> <td align="center">NO</td> </tr> <tr> <td>(3)</td> <td>Right</td> <td align="center">NO</td> </tr> <tr> <td>(4)</td> <td>Right</td> <td align="center">NO</td> </tr> </table>	Laboratory Conditions:			Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	71°	49%	Sample 9.6:	Impact eye Location	Fracture, penetration, etc	(1)	Left	NO	(2)	Left	NO	(3)	Right	NO	(4)	Right	NO	PASS
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5.2.2	Protector Criteria	See section 5.2.1	Info only																								
5.2.3 (9.7)	Ignition:  Protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of textiles or elastic bands) shall be tested.	<table border="1"> <tr> <td>Sample #:</td> <td align="center">2</td> </tr> </table> <table border="1"> <tr> <th align="center" colspan="3">Laboratory Conditions:</th> </tr> <tr> <td>Req'd:</td> <td>Temperature Range 18-28 °C (65-82 °F)</td> <td>Humidity Range 35-65 %</td> </tr> <tr> <td>Actual:</td> <td align="center">72°</td> <td align="center">61%</td> </tr> </table> <table border="1"> <tr> <th>Type</th> <th>Ignition</th> <th>Afterglow</th> </tr> <tr> <td>Lens</td> <td align="center">NO</td> <td align="center">NO</td> </tr> <tr> <td>Frame</td> <td align="center">NO</td> <td align="center">NO</td> </tr> <tr> <td>Temple</td> <td align="center">NO</td> <td align="center">NO</td> </tr> </table>	Sample #:	2	Laboratory Conditions:			Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	72°	61%	Type	Ignition	Afterglow	Lens	NO	NO	Frame	NO	NO	Temple	NO	NO	PASS	
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Section (Test)	Requirement	Results	Compliance																													
<b>5</b>	<b>General Requirements (All Protectors)</b>																															
<b>5.2.4 (9.8)</b>	<p>Corrosion Resistance:</p> <p>Metal components used in protectors shall be corrosion resistant to the degree that the function of the protector shall not be impaired by the corrosion. Lenses and electrical components are excluded from these requirements.</p> <table border="1"> <tr> <td>Date/Time:</td> <td>9/18/12 – 9/19/12 / 1pm</td> </tr> <tr> <td>9/18/12</td> <td>Brine solution:</td> </tr> <tr> <td>9/18/12</td> <td>Boil for 15 minutes</td> </tr> <tr> <td>9/18/12</td> <td>Immerse in room temp solution</td> </tr> <tr> <td>9/18/12-9/19/12</td> <td>Dry for 24-hours at room temp</td> </tr> <tr> <td>9/19/12</td> <td>Rinse, air dry, evaluate</td> </tr> </table>	Date/Time:	9/18/12 – 9/19/12 / 1pm	9/18/12	Brine solution:	9/18/12	Boil for 15 minutes	9/18/12	Immerse in room temp solution	9/18/12-9/19/12	Dry for 24-hours at room temp	9/19/12	Rinse, air dry, evaluate	<table border="1"> <tr> <th colspan="3">Laboratory Conditions:</th> </tr> <tr> <td>Req'd:</td> <td>Temperature Range 18-28 °C (65-82 °F)</td> <td>Humidity Range 35-65 %</td> </tr> <tr> <td>Actual:</td> <td>67-73°</td> <td>58-63%</td> </tr> </table> <table border="1"> <tr> <td>Sample #:</td> <td></td> </tr> <tr> <td>Metal Components</td> <td>Function Impaired</td> </tr> <tr> <td>Screw 1</td> <td>NO</td> </tr> <tr> <td>Screw 2</td> <td>NO</td> </tr> </table>	Laboratory Conditions:			Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	67-73°	58-63%	Sample #:		Metal Components	Function Impaired	Screw 1	NO	Screw 2	NO	PASS
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5.2.5	<p>Minimum Coverage Area:</p> <p>The eyewire and lens shall cover in plain view an area of not less than 40 mm (1.57 in.) in width and 33 mm (1.30 in.) in height (elliptical) in front of each eye, centered on the geometrical center of the lens.</p> <p>Frames designed for small head sizes shall cover in plain view an area of not less than 34 mm (1.34 in.) in width and 28 mm (1.10 in.) in height (elliptical), centered on the geometrical center of the lens.</p> <p>Frames designed for small head sizes shall be tested on the 54 mm (2.13 in.) PD headform and are permitted to have an eye size, including eyewire thickness, as small as 34 x 28 mm (1.34 x 1.10 in.). Frames that are tested using the small headform shall be marked on the frame with the letter "H".</p>	<table border="1"> <tr> <td>Sample #:</td> <td>1</td> </tr> <tr> <td colspan="2">Minimum Coverage</td> </tr> <tr> <td colspan="2">YES</td> </tr> </table>	Sample #:	1	Minimum Coverage		YES		PASS																							
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5.3	<p>Minimum Lens Thickness:</p> <p>The minimum lens thickness for specified protector shall be those indicated in Table 3.</p>	<table border="1"> <tr> <td>Sample #:</td> <td>1</td> </tr> <tr> <td>Type: (see table below)</td> <td>6</td> </tr> <tr> <td>Measured Lens Thickness (mm):</td> <td>1.61</td> </tr> </table>	Sample #:	1	Type: (see table below)	6	Measured Lens Thickness (mm):	1.61	PASS																							
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5.4	<p>Marking Requirements:</p> <p>All protectors shall bear the permanent markings in specified locations as shown in Table 4a of the standard. Markings shall follow the sequence shown in Table 4b of the standard. Marking for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer.</p> <p>In addition, the components of frames that are intended for prescription protector use shall be marked for size in accordance with the system described in ANSI Z80.5-2004. Fronts shall be marked with the A-dimension (eye size) and DBL.</p>	<table border="1"> <tr> <td>Sample #:</td> <td>1</td> </tr> <tr> <td colspan="2">Markings on Sample</td> </tr> <tr> <td colspan="2">VICZ87+U6</td> </tr> <tr> <td>Meets requirements of Table 4a or 4b:</td> <td>YES</td> </tr> </table>	Sample #:	1	Markings on Sample		VICZ87+U6		Meets requirements of Table 4a or 4b:	YES	PASS																					
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**Section 6, Impact Protector Requirements (Z87+)**

Section (Test)	Requirement	Results	Compliance														
6	Impact Protector Requirements (Z87+)																
6.1	General																
6.1.1	Impact Rated Protectors:  Shall meet the impact requirements and be marked per Tables 4a and 4b of the standard.	Information only															
6.1.2	Frames and Shells	Tested as a complete device, see test sections 6.2.2 and 6.2.3	PASS														
6.1.3 (9.10)	Lateral (side) Coverage:  Impact rated protectors shall provide continuous lateral coverage (i.e. no openings greater than 1.5 mm (.06 in.) in diameter) from the edge of the lens to a point not less than 10 mm (0.394 in.) posterior to the corneal plane and not less than 10 mm (0.394 in.) above and not less than 10 mm (0.394 in.) below the horizontal plane centered on the eyes of the headform.	<table border="1"> <thead> <tr> <th>Sample #:</th> <th>Coverage</th> </tr> </thead> <tbody> <tr> <td>0° Right (random) 10 mm above</td> <td>YES</td> </tr> <tr> <td>90° Right 10mm above</td> <td>YES</td> </tr> <tr> <td>90° Left 10mm above</td> <td>YES</td> </tr> <tr> <td>0° Left (random) 10mm below</td> <td>YES</td> </tr> <tr> <td>90° Right 10mm below</td> <td>YES</td> </tr> <tr> <td>90° Left 10mm below</td> <td>YES</td> </tr> </tbody> </table>	Sample #:	Coverage	0° Right (random) 10 mm above	YES	90° Right 10mm above	YES	90° Left 10mm above	YES	0° Left (random) 10mm below	YES	90° Right 10mm below	YES	90° Left 10mm below	YES	PASS
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<b>6.2.2 (9.11)</b>	<p><b>High Mass Impact:</b></p> <p>The complete device shall be capable of resisting an impact from a pointed projectile.</p> <p>A complete device shall fail if any of the following occurs; piece fully detached from inner surface, fracture, penetration of the rear surface, lens not retained.</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="3">Impactor- Pointed Projectile</th> </tr> <tr> <th></th> <th>Required</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td>Weight, (grams)</td> <td>500</td> <td>502</td> </tr> <tr> <td>Drop Height, cm (inch)</td> <td>127 (50")</td> <td>50"</td> </tr> </tbody> </table>	Impactor- Pointed Projectile				Required	Actual	Weight, (grams)	500	502	Drop Height, cm (inch)	127 (50")	50"	<p align="center"><b>Laboratory Conditions:</b></p> <table border="1" style="margin-left: 40px;"> <tr> <td>Req'd:</td> <td>Temperature Range 18-28 °C (65-82 °F)</td> <td>Humidity Range 35-65 %</td> </tr> <tr> <td>Actual:</td> <td>71°</td> <td>49%</td> </tr> </table> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Sample 9.11:</th> <th>Impact eye Location</th> <th>Fracture, penetration, etc</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>Left</td> <td>NO</td> </tr> <tr> <td>(2)</td> <td>Left</td> <td>NO</td> </tr> <tr> <td>(3)</td> <td>Right</td> <td>NO</td> </tr> <tr> <td>(4)</td> <td>Right</td> <td>NO</td> </tr> </tbody> </table>	Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	71°	49%	Sample 9.11:	Impact eye Location	Fracture, penetration, etc	(1)	Left	NO	(2)	Left	NO	(3)	Right	NO	(4)	Right	NO	PASS															
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<b>6.2.3 (9.12)</b>	<p><b>High Velocity Impact:</b></p> <p>The complete device shall be capable of resisting impact from a 6.35 mm (0.25 in) diameter steel ball traveling at the velocity specified in Table 5 (see Appendix A). No contact with the eye of the headform is permitted as a result of the impact.</p> <p>A complete device shall fail if any of the following occurs; piece fully detached from inner surface, fracture, penetration of the rear surface, lens not retained. For the high-velocity test, the unaided eye observes any piece adhering to the contact paste, or observes contact paste on the projectile or complete device.</p> <p><b>**Complete APPENDIX A prior to testing**</b></p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="3">Steel Ball</th> </tr> <tr> <th></th> <th>Required</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td>Diameter, mm</td> <td>6.35</td> <td>6.34</td> </tr> <tr> <td>Weight, grams</td> <td>1.06</td> <td>1.01</td> </tr> </tbody> </table>	Steel Ball				Required	Actual	Diameter, mm	6.35	6.34	Weight, grams	1.06	1.01	<p align="center"><b>Laboratory Conditions:</b></p> <table border="1" style="margin-left: 40px;"> <tr> <td>Req'd:</td> <td>Temperature Range 18-28 °C (65-82 °F)</td> <td>Humidity Range 35-65 %</td> </tr> <tr> <td>Actual:</td> <td>71°</td> <td>51%</td> </tr> </table> <table border="1" style="margin-left: 40px;"> <tr> <td>Sample #:</td> <td>9.12</td> </tr> </table> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>#</th> <th>Impact Location</th> <th>Impact Velocity (ft/s)</th> <th>Contact w/ eye</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>0° Rt. Eye</td> <td>152.9</td> <td>NO</td> </tr> <tr> <td>(2)</td> <td>30° Rt. Eye</td> <td>153.0</td> <td>NO</td> </tr> <tr> <td>(3)</td> <td>*90° Rt. Eye (above)</td> <td>151.8</td> <td>NO</td> </tr> <tr> <td>(4)</td> <td>0° Lt. Eye</td> <td>153.0</td> <td>NO</td> </tr> <tr> <td>(5)</td> <td>30° Lt. Eye</td> <td>152.9</td> <td>NO</td> </tr> <tr> <td>(6)</td> <td>*90° Lt. Eye (below)</td> <td>152.7</td> <td>NO</td> </tr> </tbody> </table> <p align="center"><b>*10 mm above or below the plane of the eyes.</b></p>	Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	71°	51%	Sample #:	9.12	#	Impact Location	Impact Velocity (ft/s)	Contact w/ eye	(1)	0° Rt. Eye	152.9	NO	(2)	30° Rt. Eye	153.0	NO	(3)	*90° Rt. Eye (above)	151.8	NO	(4)	0° Lt. Eye	153.0	NO	(5)	30° Lt. Eye	152.9	NO	(6)	*90° Lt. Eye (below)	152.7	NO	PASS
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**INTERTEK TEST DATA SHEETS**

Client: Vicsa Safety SA Engineer: Erik Sprague  
 Job No.: G100766457 Tested By: Erik Sprague Date: 9/18/12-9/26/12  
 Product: Spectacles Reviewed By: Sara Ensign Date: 9/27/12  
 Model No.: Spy Flex Standard: ANSI/ISEA Z87.1-2010  
 Description: Safety Spectacles with clear lenses

Sample Control Number: **2012-06-250592; 2012-08-253704; 2012-08-253705** **TRANSCRIBED TEST DATA**

Type:	Spectacle: X	Goggle:	Faceshield:	WH Lenses:	FF Respirator:	Removable:
Style:	Plano: X	Rx:	Photochromatic:	Tinted:	Clear: X	Non-Removable: X

Section (Test)	Requirement	Results	Compliance																																				
<b>6</b>	<b>Impact Protector Requirements (Z87+)</b>																																						
<b>6.2.4 (9.13)</b>	Penetration Test (lenses only): Lenses for all complete devices shall be capable of resisting penetration by a weighted needle.  A complete device shall fail if any of the following occurs; piece fully detached from inner surface, fracture, penetration of the rear surface, lens not retained.  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Needle Penetrator</th> </tr> <tr> <th></th> <th>Required</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td>Weight, grams</td> <td>44.2</td> <td>43.95</td> </tr> <tr> <td>Drop Height, cm (inch)</td> <td>127 (50")</td> <td>50"</td> </tr> </tbody> </table>	Needle Penetrator				Required	Actual	Weight, grams	44.2	43.95	Drop Height, cm (inch)	127 (50")	50"	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Laboratory Conditions:</th> </tr> <tr> <th>Req'd:</th> <th>Temperature Range 18-28 °C (65-82 °F)</th> <th>Humidity Range 35-65 %</th> </tr> </thead> <tbody> <tr> <td>Actual:</td> <td>71°</td> <td>49%</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Sample 9.13:</th> <th>Impact eye Location</th> <th>Penetration</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>Left</td> <td>NO</td> </tr> <tr> <td>(2)</td> <td>Left</td> <td>NO</td> </tr> <tr> <td>(3)</td> <td>Right</td> <td>NO</td> </tr> <tr> <td>(4)</td> <td>Right</td> <td>NO</td> </tr> </tbody> </table>	Laboratory Conditions:			Req'd:	Temperature Range 18-28 °C (65-82 °F)	Humidity Range 35-65 %	Actual:	71°	49%	Sample 9.13:	Impact eye Location	Penetration	(1)	Left	NO	(2)	Left	NO	(3)	Right	NO	(4)	Right	NO	PASS
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