



# REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. G100792302

Date: October 31, 2012

REPORT NO. 100792302CRT-007

TEST OF SAFETY GLASSES  
MODELS

DISCOVERY CLEAR	DISCOVERY GREY
DISCOVERY IN/OUT	

RENDERED TO

VICSA SAFETY SA  
PINTOR CICARELLI 683  
8950002 SAN JOAQUIN, CHILE

DATA REQUESTED

The client requested optical testing to Section 5 of ANSI Z87.1.

AUTHORIZATION

This test service was authorized by signed quote number 500387586.

REFERENCE DOCUMENTS:

The following Test Standards were used in part or in total to test each sample:

- ANSI Z87.1 2010 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
- ASTM D1003 2007 Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics

DEVICES SUBMITTED

The samples were received by Intertek in undamaged condition, and were tested as received. The sample designations were 792302-17 through 792302-19

DATES OF TESTS

October 22 through October 30, 2012

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EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Calibration Date	Calibration Due Date
Optronics Spectroradiometer	OL750D	E288	10/24/12	10/25/12
Optronics Spectroradiometer	OL770	O320	10/23/12	10/24/12
Gardner Hazemeter	XL211	N328	10/25/12	11/25/12
Extech Hygrothermometer	445703	T1305	07/12/12	07/12/13
Intertek 100ft Goniometer	NA	N060	08/14/12	08/14/13

TESTS

Section 5.1.1 Optical Quality:

Lenses shall be free of striae, bubbles, waves and other visible defects which would impair their optical quality.

Section 5.1.2 Luminous Transmission:

Clear lenses shall have a luminous transmission of not less than 85%. Clear and Filter lenses shall be labeled in accordance with Table 4a of ANSI Z87.1. Plano and prescription lenses shall comply with Tables 6 – 10 of ANSI Z87.1 where applicable.

Section 5.1.3 Haze:

Clear and plano lenses shall not exhibit more than 3% haze.

Section 5.1.4 Refractive Power, Astigmatism, Resolving Power, Prism and Prism Imbalance:

Lenses shall meet the tolerances for Refractive Power, Astigmatism and Resolving power as specified in Table 1 of ANSI Z87.1. Lenses shall meet the tolerances for Prism and Prism Imbalance as specified in Table 2 of ANSI Z87.1.

Protector	Refractive Power	Astigmatism	Resolving Power
Spectacle	± 0.06 D	≤ 0.06 D	Pattern 20
Goggle	± 0.06 D	≤ 0.06 D	Pattern 20
Faceshield Windows	No Requirement	No Requirement	Pattern 20
Welding Helmet Lenses	± 0.06 D	≤ 0.06 D	Pattern 20

Protector	Prism	Vertical Imbalance	Base In Imbalance	Base Out Imbalance
Spectacle	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.50 Δ
Goggle	≤ 0.25 Δ	≤ 0.125 Δ	≤ 0.125 Δ	≤ 0.50 Δ
Faceshields	≤ 0.37 Δ	≤ 0.37 Δ	≤ 0.125 Δ	≤ 0.75 Δ
Welding Lenses	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.75 Δ



RESULTS OF TEST

Section 5.1.1 Optical Quality:

Control Number	Model Number	Defects	Notes	Pass/Fail
792302-17	CLEAR	None	---	Pass
792302-18	GREY	None	---	Pass
792302-19	IN/OUT	None	---	Pass

Section 5.1.2 Luminous Transmission:

Control Number	Model Number	Percent Transmittance		Pass/Fail/NA
		Left Eye	Right Eye	
792302-17	CLEAR	86.01	85.85	Pass
792302-18	GREY	14.16	12.83	NA
792302-19	IN/OUT	46.45	48.13	NA

Section 5.1.3 Haze:

Control Number	Model Number	Percent Haze		Pass/Fail/NA
		Left Eye	Right Eye	
792302-17	CLEAR	1.08	0.43	Pass
792302-18	GREY	2.14	1.93	Pass
792302-19	IN/OUT	0.22	0.19	Pass

Section 5.1.4 Refractive Power, Astigmatism, Resolving Power

Control Number	Model Number	Eye	Refractive Power (diopters)	Astigmatism (diopters)	Resolving Power	Pass/Fail
792302-17	CLEAR	Left	0.00	0.05	48	Pass
		Right	-0.01	0.05	48	
792302-18	GREY	Left	0.01	0.04	48	Pass
		Right	0.01	0.04	48	
792302-19	IN/OUT	Left	0.01	0.05	48	Pass
		Right	0.00	0.05	48	



RESULTS OF TEST (continued)

Section 5.1.4 Prism and Prism Imbalance

Control Number	Model Number	Eye	Prism ( $\Delta$ )	Vertical Imbalance ( $\Delta$ )	Base in Imbalance ( $\Delta$ )	Base Out Imbalance ( $\Delta$ )	Pass/Fail
792302-17	CLEAR	Left Right	0.10 0.10	-0.06	-0.19	---	Pass
792302-18	GREY	Left Right	0.10 0.10	-0.06	-0.19	---	Pass
792302-19	IN/OUT	Left Right	0.10 0.10	-0.06	-0.19	---	Pass

Transmittance Ratings

Control Number	Model Number	Eye	Visible Light	UV Transmittance (%)			U-Scale
			Transmittance (%)	L-Scale	Far UV	Near UV	
792302-17	CLEAR	Left Right	86.01 85.85	Clear	0.00	0.00	U6
792302-18	GREY	Left Right	14.16 12.83	L3	0.00	0.00	U6
792302-19	IN/OUT	Left Right	46.45 48.13	L1.7	0.00	0.00	U6



PHOTO OF SAMPLE(S):

DISCOVERY CLEAR



DISCOVERY GREY



DISCOVERY IN/OUT



In Charge Of Tests:

Denis Niggli  
Engineer  
Lighting Division

Report Reviewed By:

David Ellis  
Senior Project Engineer  
Lighting Division