



## **REPORT**

**No:** 32563  
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**Prepared for:**  
**GLOBAL SAFETY FIRST LLC**

**A RANGE OF DISPOSABLE RESPIRATORS**

Issued by

**TESTSAFE AUSTRALIA**

Dealing with

**ASSESSMENT AND TESTING OF DISPOSABLE RESPIRATORS TO  
AUSTRALIAN/NEW ZEALAND STANDARD 1716:2003,  
'RESPIRATORY PROTECTIVE DEVICES'**

## Report Details

**Note:** The test results contained in this report apply only to the samples submitted for testing and may not be indicative of the total batch from which the sample was drawn, or other manufactured batches of these types of respirators.

<b>Your Reference:</b>	Application from Ecomembranes dated 20 May 2010 on behalf of Global Safety First LLC for the testing of a range of disposable respirators to AS/NZS1716: 2003.
<b>Objective:</b>	To determine whether the equipment listed below meets the requirements of the Australian/New Zealand Standard 1716: 2003.
<b>Equipment:</b>	READIMASK-Particulate respirator P2 'Half Mask' READIMASK-Particulate respirator P2 'Adult Mask' READIMASK-Particulate respirator P2 'Child Mask'
<b>Manufacturer:</b>	Global Safety First LLC 50 Curtis Avenue Manasquan NJ 08736 3502 US
<b>Submitter:</b>	Eco membrane systems Unit 2/1 St James Place Seven Hills NSW Australia 2147
<b>Result Summary Complies:</b>	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.8, 2.2.1, 2.2.2, 3.1.1, 3.2.1, 3.2.5, 4.1, 4.2.1, 4.2.2, 4.3.1, 4.3.3, 4.3.4, 4.3.5, 12.1.2.1, 12.1.2.2, 12.1.3.1, 12.1.3.2, 12.2.1, 12.2.2
<b>Does not comply:</b>	Nil.
<b>Submitted Information:</b>	1. Application from Ecomembranes dated 20 May 2010 on behalf of Global Safety First LLC for the testing of a range of disposable respirators to AS/NZS1716: 2003.
<b>Conclusion and Recommendation:</b>	The disposable respirators as listed in 'Equipment' satisfied the performance requirements for Class P2 of AS/NZS1716: 2003. They also satisfied the requirements to Section 12 Marking and Instructions.

**CLAUSES ASSESSED****SECTION 2 DESIGN AND CONSTRUCTION OF ASSEMBLED RESPIRATORS****2.1 GENERAL REQUIREMENTS****2.1.1 Assembled respirators**

Satisfactory.

**2.1.2 Materials**

Satisfactory.

**2.1.3 Filters**

General

Satisfactory.

Mass

Pass. For results, see Table 1.

<b>MODEL</b>	<b>MASS (g)</b>	<b>MODEL</b>	<b>MASS (g)</b>
READIMASK-Particulate respirator P2 'Child Mask'	6.75	READIMASK-Particulate respirator P2 'Half Mask'	6.68
	6.94		6.66
	6.91		6.98
READIMASK-Particulate respirator P2 'Adult Mask'	8.98		
	9.30		
	9.08		
<b>AS/NZS1716: 2003</b>	<b>≤ 300g</b>	<b>AS/NZS1716: 2003</b>	<b>≤ 300g</b>

**2.1.4 Shelf life**

Satisfactory. While it is impractical to test this, it is assessed that the respirators would have a shelf life of at least 5 years when stored according to the recommendations of Section 9 of Australian Standard, "AS/NZS 1715: 2009, Selection, use and maintenance of respiratory protective equipment".

**2.1.5 Combined protective equipment**

Not applicable. The 'Adult Mask' and 'Child Mask' have a plastic visor covering the eyes. Any protection afforded by the visor is beyond the scope of AS/NZS1716: 2003. Where safety eye protection is required for use in Australia, an eye protector to AS/NZS1337 shall be worn over the top as per Readimask instructions.

**2.1.6 to 2.1.7**

Not applicable.

**2.1.8 Avoidance of frictional sparks**

Satisfactory.

**2.1.9 Protection from flame impingement**

Not applicable.

**2.2 FACIAL FIT****2.2.1 General**

Satisfactorily applied. For results, see Clause 2.2.2.

**2.2.2 Assessment**

Pass. For results, see Table 2.

<b>TABLE 2-TOTAL INWARD LEAKAGE-P2</b>					
<b>EXERCISE</b>	<b>SUBJECT NUMBER</b>				
	<b>1</b> READIMASK Particulate Respirator P2 'Half Mask'	<b>2</b> READIMASK Particulate Respirator P2 'Child Mask'	<b>3</b> READIMASK Particulate Respirator P2 'Child Mask'	<b>4</b> READIMASK Particulate Respirator P2 'Adult Mask'	<b>5</b> READIMASK Particulate Respirator P2 'Adult Mask'
<b>HEAD STILL</b>	0.502	0.301	0.985	2.650	1.038
<b>HEAD SIDE TO SIDE</b>	0.581	0.421	1.253	2.967	1.178
<b>HEAD UP AND DOWN</b>	0.568	0.409	1.213	3.111	1.142
<b>READING PASSAGE</b>	0.581	0.372	0.993	3.034	1.849
<b>HEAD STILL</b>	0.571	0.200	0.709	1.860	1.242
<b>MEAN</b>	0.561	0.341	1.031	2.725	1.290
<b>AS/NZS 1716: 2003</b>	<b>Individual exercises and mean result: ≤ 8% for Class P2 non-powered half facepiece respirators</b>				

Note: 1. The number of test subjects is less than that specified in D4.1 of Appendix D (10). It is assessed that the test panel used was adequate to show up any facial fit deficiencies.

**2.3 to 2.4**

Not applicable.

SECTION 3 FACEPIECES AND HEAD COVERINGS

**3.1 DESIGN REQUIREMENTS**

**3.1.1 General**

- (a) Satisfactory.
- (b) Satisfactory.
- (c) Satisfactory.
- (d-e) Not applicable.
- Remainder
- Paragraph 1-Satisfactory.
- Paragraphs 2-4-Not applicable.

**3.1.2 to 3.1.4**

Not applicable.

**3.2 PERFORMANCE REQUIREMENTS**

**3.2.1 Facial fit**

Satisfactorily applied. See Clause 2.2.2.

**3.2.2 to 3.2.4**

Not applicable.

**3.2.5 Exhalation resistance-Air filtering respirators**

Pass. For results, see Table 3.

**TABLE 3- EXHALATION RESISTANCE**

MODEL	EXHALATION RESISTANCE At 85L/min (Pa)
READIMASK Particulate Respirator P2 ‘Child Mask’	60
READIMASK Particulate Respirator P2 ‘Child Mask’	70
READIMASK Particulate Respirator P2 ‘Child Mask’	70
READIMASK Particulate Respirator P2 ‘Adult Mask’	80
READIMASK Particulate Respirator P2 ‘Adult Mask’	60
READIMASK Particulate Respirator P2 ‘Adult Mask’	80
READIMASK Particulate Respirator P2 ‘Half Mask’	70
READIMASK Particulate Respirator P2 ‘Half Mask’	70
READIMASK Particulate Respirator P2 ‘Half Mask’	65
<b>AS/NZS1716: 2003</b>	<b>≤ 120 for half facepieces</b>

**3.2.6 Security of attachments**

Not applicable. There were no straps or attachments.

SECTION 4 PARTICULATE FILTER RESPIRATORS

4.1 DESIGN AND CONSTRUCTION

Noted and applied.

4.2 CLASSIFICATION AND COMPONENTS

4.2.1 Classes

The respirators are classified as (b) Class P2.

4.2.2. Components

Satisfactory. The respirators incorporated a particulate filter complying with Clause 4.3.

They also incorporated: (a) A half facepiece held securely in position by an adhesive seal;  
(c-g) Not applicable.

4.3 PERFORMANCE REQUIREMENTS

4.3.1 General

Noted and applied.

4.3.2 Simulated rough usage

Not applicable.

4.3.3 Simulated wear

Satisfactorily applied. Nine (9) respirators were separately conditioned for 2.75 hours and then tested for inhalation resistance and particulate filtering efficiency.

4.3.4 Inhalation Resistance

Pass. For results, see Table 4.

<b>TABLE 4- INHALATION RESISTANCE</b>		
<b>MODEL</b>	<b>INHALATION RESISTANCE</b>	
	<b>30L/min (Pa)</b>	<b>95L/min (Pa)</b>
READIMASK Particulate Respirator P2 ‘Child Mask’	25	140
READIMASK Particulate Respirator P2 ‘Child Mask’	25	150
READIMASK Particulate Respirator P2 ‘Child Mask’	25	140
READIMASK Particulate Respirator P2 ‘Adult Mask’	25	150
READIMASK Particulate Respirator P2 ‘Adult Mask’	25	140
READIMASK Particulate Respirator P2 ‘Adult Mask’	25	140
READIMASK Particulate Respirator P2 ‘Half Mask’	25	140
READIMASK Particulate Respirator P2 ‘Half Mask’	25	145
READIMASK Particulate Respirator P2 ‘Half Mask’	25	140
<b>AS/NZS1716: 2003</b>	<b>≤ 120 for P2 respirators</b>	<b>≤ 370 for P2 respirators</b>

**4.3.5 Test of filtering efficiency**

Pass. For results, see Table 5.

<b>TABLE 5-FILTERING EFFICIENCY</b>	
<b>MODEL</b>	<b>FILTERING EFFICIENCY (%)</b>
READIMASK Particulate Respirator P2 'Child Mask'	3.75
READIMASK Particulate Respirator P2 'Child Mask'	3.38
READIMASK Particulate Respirator P2 'Child Mask'	3.62
READIMASK Particulate Respirator P2 'Adult Mask'	1.56
READIMASK Particulate Respirator P2 'Adult Mask'	2.38
READIMASK Particulate Respirator P2 'Adult Mask'	1.30
READIMASK Particulate Respirator P2 'Half Mask'	2.95
READIMASK Particulate Respirator P2 'Half Mask'	3.36
READIMASK Particulate Respirator P2 'Half Mask'	2.41
<b>AS/NZS 1716: 2003</b>	<b>≤ 6 for P2 respirators</b>

**4.3.6 Filters used in series**

Not applicable.

**SECTION 12 MARKING AND INSTRUCTIONS****12.1 MARKING****12.1.1 General**

Noted.

**12.1.2 Marking of facepieces and head coverings****12.1.2.1 Marking of equipment**

- (a) Satisfactory.
- (b) Satisfactory.

**12.1.2.2 Additional marking**

- (a) Satisfactory.
- (b) Not applicable.
- (c) Satisfactory.

**12.1.3 Particulate filters****12.1.3.1 Marking of equipment**

- (a) Satisfactory.
- (b) Satisfactory.
- (c) Not applicable.

**12.1.3.2 Additional marking**

- (a) Satisfactory.
- (b) Satisfactory.
- (c-e) Not applicable.

**12.1.4 to 12.1.9**

Not applicable.

**12.2 INSTRUCTIONS FOR USE****12.2.1 General**

Satisfactory. Each respirator was supplied with clear instructions for use, printed in English.

- (a) Satisfactory.
- (b) Satisfactory.

**12.2.2 Instructions for use, maintenance and storage**

Satisfactory. On delivery, instructions accompanied each 10 pack of disposable respirators in the smallest packaging unit.

- (a) Satisfactory.
  - (b) Not applicable.
  - (c) Not applicable.
  - (d) Satisfactory.
  - (e) Satisfactory.
  - (f-g) Not applicable.
- Remainder-Not applicable.

**12.2.3 Additional requirements for powered air-purifying respirators**

Not applicable.

**12.2.4 Instructions for use of the chemical oxygen (KO<sub>2</sub>) self-contained self rescuers**

Not applicable.

**12.3 ADDITIONAL MARKING**

Not applicable.



**Andrew Hooke**  
**Senior Technical Officer (Scientific)**  
**Personal Protective Equipment**  
**TestSafe Australia**



**David Pearson**  
**Branch Manager**  
**F&E/PPE**  
**TestSafe Australia**