

CSM BOX GLOVES

SIZE INFORMATION

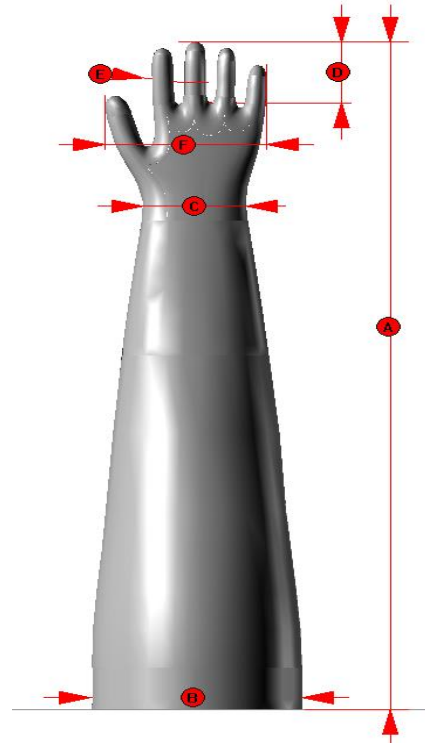
CURRENT AVAILABLE SIZES

7#, 8#, 10#

STYLE NUMBER

ER-7C2032/9A ER-8C2032/9A ER-10C2032/9A

SIZE CHART



PART	A	B	C	D	E	F	UNIT : mm
Available Size	Nominal Length	Port Size	Wrist Circumference	Middle Finger Length	Middle Finger Circumference	Palm Width	Thickness
7#	800	567	262	75	85	157	0.5 - 0.6
8#	800	645	262	75	85	157	
10#	800	810	262	97	87	157	

Remarks :

- (1) The measurement position of C is about 20cm from the middle fingertip
- (2) E is near the center of the finger
- (3) B, C, E refers to the circumference of a part of the product
- (4) A is the total length of the product
- (5) F is the diameter of this part



Total Quality. Assured.
TEST REPORT



中国认可
国际互认
检测
TESTING
CNAS L0220

Number: GZHT91249600

Date: Apr 30, 2024

Applicant: EAST ROCK RUBBER CO., LTD.
NO. 1, XINFA INDUSTRIAL PARK,
XINFA TOWN, LANGXI COUNTY, XUANCHENG
CITY, ANHUI PROVINCE
Attn: XIAO GAO

Sample Description:

Forty (40) pieces of submitted samples said to be CSM Gloves in White.

Standard : BS EN ISO 21420:2020 / ISO 21420:2020
BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018
EN ISO 374-2:2019

Buyer's Name : --
Colour : White
Vendor : --
Manufacturer : --
Supplier : --
Style No./Name : RX-8C2032
P.O. No. : --
Size : 8
Country Of Origin : --
Goods Exported To : --
Date Received/Date Test Started: Mar 27, 2024
Date Final Information Confirmed: Apr 30, 2024

Test Result Please Refer To Attached Page(S).

Should you have any query on this report, you may contact at gzfootwear@intertek.com

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检验检测专用章

SHENZHEN BRANCH

(6)

1 Glove Design And Construction - General (BS EN ISO 21420:2020 / ISO 21420:2020, 4.1)

Requirement	Yes	No	N/A
The Protector Shall Be Designed And Manufactured So That In The Foreseeable Conditions Of Use, The User Can Perform The Activity As Normally As Possible With An Appropriate Protection. This Document Along With The Appropriate Specific Standards Shall Be Used To Verify This Adequation.	√		
If Required In The Relevant Specific Standard (For Example ISO 16073:2011, 5.7.3), The Glove Shall Be Designed To Minimize The Donning And Doffing Time.	√		
For Reusable Multilayer Protector, The Gloves Shall Be Able To Doffed Without Separation Of The Layers Of The Fingers. When The Protector Construction Includes Seams, The Material And Strength Of The Seams Shall Be Such That The Overall Performance Of The Protector Is Not Significantly Decreased As Required In The Relevant Specific Standards.			√

2 Glove Length (BS EN ISO 21420:2020 / ISO 21420:2020, 6.1)

Size 8

Specimen 1 Glove Length: 795 mm

Specimen 2 Glove Length: 797 mm

Specimen 3 Glove Length: 800 mm

3 Dexterity (BS EN ISO 21420:2020 / ISO 21420:2020, 6.2)

The Smallest Diameter Of Pin Picked Up

Specimen 1(Left Hand): 5 mm

Specimen 2(Right Hand): 5 mm

Specimen 3(Left Hand): 5 mm

Specimen 4(Right Hand): 5 mm

Performance Level: 5 (*)

Remark: * = The Classification Is Determined By The Smallest Performance Level Obtained On The 4 Gloves.

Level Of Performance	Smallest Diameter Of Pin Fulfilling Test Conditions
Level 1	11 mm
Level 2	9.5 mm
Level 3	8 mm
Level 4	6.5 mm
Level 5	5 mm

4 Abrasion Resistance (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.1, 9 kPa)

Adhesion Contact Time Of Test Specimen With The Double-Sided Adhesive Tape Under A Weight Of A Approximatley 10 kg	5 Min
Surface Treatment Of Test Specimen In Order To Improve Adhesion	No Surface Treatment
Abradant	The Klingspor PL 31 B-Grit 180 Grain Aluminium Oxide
Double-Sided Adhesive Tape	3M™ Double-Sided Adhesive Tape

Observation	Specimen 1	Specimen 2	Specimen 3	Specimen 4
After 100 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 500 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 2000 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 8000 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough

Performance Level: 4

Remark:

The Minimum Requirements For Each Level:

Level 1: 100 Cycles

Level 2: 500 Cycles

Level 3: 2000 Cycles

Level 4: 8000 Cycles

5 Blade Cut Resistance (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.2)

Pretreatment Of Test Specimen Before Testing: No Pretreatment

Specimen 1				
Sequence	Control Specimen	Test Specimen	Control Specimen	Cut Index
	C_n	T_n	C_{n+1}	I_n
1	0.8	0.8	1.4	1.7
2	1.4	1.0	1.8	1.6
3	1.8	1.0	1.9	1.5
4	1.9	1.7	2.2	1.8
5	1.4	0.8	2.7	1.4
Average	1.6			
Specimen 2				
Sequence	Control Specimen	Test Specimen	Control Specimen	Cut Index
	C_n	T_n	C_{n+1}	I_n
1	0.8	0.4	1.7	1.3
2	1.7	0.8	2.4	1.4
3	1.1	0.8	1.8	1.6
4	1.8	1.0	1.9	1.5
5	1.9	1.4	2.2	1.7
Average	1.5			
The Lowest Average Index Of Two Specimens			1.5	
Performance Level (*)			1	

Remark:

The Minimum Requirements For Each Level:

Level 1: 1.2

Level 2: 2.5

Level 3: 5.0

Level 4: 10.0

Level 5: 20.0

* = The Performance Level Is Defined As The Lowest Average Index Values Of Two Test Specimens From The Different Gloves.

6 Puncture Resistance (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.5)

Specimen 1:	56 N
Specimen 2:	55 N
Specimen 3:	75 N
Specimen 4:	74 N
Performance Level (*):	1

Remark:

Level 1: 20 N

Level 2: 60 N

Level 3: 100 N

Level 4: 150 N

Remark: * = The Performance Level Is Defined By The Lowest Value Of The Four Test Specimens.

7 Tear Resistance (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.4)

Test Area: Glove Palm

Specimen 1:	29 N
Specimen 2:	31 N
Specimen 3:	28 N
Specimen 4:	34 N
Performance Level (*):	2

Remark:

The Minimum Requirements For Each Level:

Level 1: 10 N

Level 2: 25 N

Level 3: 50 N

Level 4: 75 N

* = The Performance Level Is Defined By Taking The Lowest Of The Four Values.

8 Air Leak Test (EN ISO 374-2:2019, 7.2)

Test Air Pressure: 7.5 kPa

Sample	Specimen	1	2	3	4	Requirement	Pass/Fail
-	Examination Before Test:	#	#	#	#	*	Pass
	Observation After 30 seconds:	#1	#1	#1	#1	*1	Pass

Remark: * = There Shall be No Tears, Rips And Holes On The Glove.

*1 = There Shall Be No Leakage Of Air.

= No Tears, Rips And Holes On The Glove.

#1 = No Leakage Of Air.

9 Water Leak Test (EN ISO 374-2:2019, 7.3)

Sample	Specimen	1	2	3	4	Requirement	Pass/Fail
-	Examination Before Test:	#	#	#	#	*	Pass
	Observation After 2 Minutes:	#1	#1	#1	#1	*1	Pass

Remark: * = There Shall be No Tears, Rips And Holes On The Glove.

*1 = There Shall Be No Leakage Of Water.

= No Tears, Rips And Holes On The Glove.

#1 = No Leakage Of Water.

10 Resistance To Degradation By Chemicals (BS EN ISO 374-4:2019 / EN ISO 374-4:2019)

Specimens Condition: 23°C, 50% r.h. For 24 Hours

Treatment Of Test Specimens: No Treatment As No Liner Present

Sample	Results		
	Test Chemical Used		L
--	Degradation		Observations
	DR1	+2.2%	After Test, Test Specimens Showed No Visible Damage
	DR2	+10.1%	After Test, Test Specimens Showed No Visible Damage
	DR3	+8.6%	After Test, Test Specimens Showed No Visible Damage
	DR	+7.0%	--

Sample	Results		
	Test Chemical Used		P
--	Degradation		Observations
	DR1	-13.2%	After Test, Test Specimens Showed No Visible Damage
	DR2	-8.3%	After Test, Test Specimens Showed No Visible Damage
	DR3	+1.0%	After Test, Test Specimens Showed No Visible Damage
	DR	-6.8%	--

Sample	Results		
	Test Chemical Used		M
--	Degradation		Observations
	DR1	+7.6%	After Test, Test Specimens Showed Colour Change
	DR2	+14.8%	After Test, Test Specimens Showed Colour Change
	DR3	+5.1%	After Test, Test Specimens Showed Colour Change
	DR	+9.2%	--

Sample	Results		
	Test Chemical Used		N
--	Degradation		Observations
	DR1	-2.9%	After Test, Test Specimens Showed No Visible Damage
	DR2	-7.6%	After Test, Test Specimens Showed No Visible Damage
	DR3	-3.7%	After Test, Test Specimens Showed No Visible Damage
	DR	-4.7%	--

Resistance To Degradation By Chemicals (Cont)

Sample	Results		
	Test Chemical Used		C
--	Degradation		Observations
	DR1	+13.6%	After Test, Test Specimens Showed No Visible Damage
	DR2	+14.5%	After Test, Test Specimens Showed No Visible Damage
	DR3	+16.3%	After Test, Test Specimens Showed No Visible Damage
	DR	+15.8%	--

Sample	Results		
	Test Chemical Used		A
--	Degradation		Observations
	DR1	-1.9%	After Test, Test Specimens Showed No Visible Damage
	DR2	-0.1%	After Test, Test Specimens Showed No Visible Damage
	DR3	+2.9%	After Test, Test Specimens Showed No Visible Damage
	DR	+0.3%	--

Sample	Results		
	Test Chemical Used		K
--	Degradation		Observations
	DR1	-34.6%	After Test, Test Specimens Showed No Visible Damage
	DR2	-31.4%	After Test, Test Specimens Showed No Visible Damage
	DR3	-9.0%	After Test, Test Specimens Showed No Visible Damage
	DR	-25.0%	--

Sample	Results		
	Test Chemical Used		O
--	Degradation		Observations
	DR1	+10.4%	After Test, Test Specimens Showed No Visible Damage
	DR2	+23.8%	After Test, Test Specimens Showed No Visible Damage
	DR3	+25.2%	After Test, Test Specimens Showed No Visible Damage
	DR	+19.8%	--

Resistance To Degradation By Chemicals (Cont)

Sample	Results		
	Test Chemical Used		T
--	Degradation		Observations
	DR1	-20.4%	After Test, Test Specimens Showed No Visible Damage
	DR2	-14.8%	After Test, Test Specimens Showed No Visible Damage
	DR3	-16.7%	After Test, Test Specimens Showed No Visible Damage
	DR	-17.3%	--

Remark: (+) Means Puncture Resistance Property Gets Worse.
 (-) Means Puncture Resistance Property Gets Better.
 DR= The Degradation Of The Test Sample Against Challenge Chemical Tested.
 DR1= The Degradation Of The First Glove Specimen Against Challenge Chemical Tested.
 DR2= The Degradation Of The Second Glove Specimen Against Challenge Chemical Tested.
 DR3= The Degradation Of The Third Glove Specimen Against Challenge Chemical Tested.

11 Chemical Protective Clothing, Glove And Footwear Against Permeation Per EN 16523-1:2015+A1:2018

Test Area: Cuff				
Tested Component	Results	Level	Break Through Time	Performance
White CSM Glove (Cuff)	Thickness: 0.77 mm Permeation Breakthrough Time: > 480 Mins Chemical: 40% Sodium Hydroxide Appearance: No Obvious Change	6	> 480 Mins	6
White CSM Glove (Cuff)	Thickness: 0.75 mm Permeation Breakthrough Time: > 480 Mins Chemical: 96% Sulphuric Acid Appearance: Faded	6	> 480 Mins	6
White CSM Glove (Cuff)	Thickness: 0.78 mm Permeation Breakthrough Time: > 480 Mins Chemical: Methanol Appearance: No Obvious Change	6	> 480 Mins	6
White CSM Glove (Cuff)	Thickness: 0.75 mm Permeation Breakthrough Time: > 480 Mins Chemical: Nitric Acid 65% Appearance: No Obvious Change	6	> 480 Mins	6

Chemical Protective Clothing, Glove And Footwear Against Permeation (Cont)

Test Area: Cuff				
Tested Component	Results	Level	Break Through Time	Performance
White CSM Glove (Cuff)	Thickness: 0.75 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Acetonitrile			
	Appearance: No Obvious Change			
White CSM Glove (Cuff)	Thickness: 0.78 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Acetic Acid 99%			
	Appearance: No Obvious Change			
White CSM Glove (Cuff)	Thickness: 0.76 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Ammonium Hydroxide 25%			
	Appearance: No Obvious Change			
White CSM Glove (Cuff)	Thickness: 0.77 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Hydrogen Peroxide 30%			
	Appearance: No Obvious Change			
White CSM Glove (Cuff)	Thickness: 0.78 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Formaldehyde 37%			
	Appearance: No Obvious Change			

Chemical Protective Clothing, Glove And Footwear Against Permeation (Cont)

Test Area: Palm				
Tested Component	Results	Level	Break Through Time	Performance
White CSM Glove (Palm)	Thickness: 0.76 mm Permeation Breakthrough Time: > 480 Mins Chemical: 40% Sodium Hydroxide Appearance: No Obvious Change	6	> 480 Mins	6
White CSM Glove (Palm)	Thickness: 0.77 mm Permeation Breakthrough Time: > 480 Mins Chemical: 96% Sulphuric Acid Appearance: Faded	6	> 480 Mins	6
White CSM Glove (Palm)	Thickness: 0.77 mm Permeation Breakthrough Time: > 480 Mins Chemical: Methanol Appearance: No Obvious Change	6	> 480 Mins	6
White CSM Glove (Palm)	Thickness: 0.76 mm Permeation Breakthrough Time: > 480 Mins Chemical: Nitric Acid 65% Appearance: No Obvious Change	6	> 480 Mins	6

Chemical Protective Clothing, Glove And Footwear Against Permeation (Cont)

Test Area: Palm				
Tested Component	Results	Level	Break Through Time	Performance
White CSM Glove (Palm)	Thickness: 0.76 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Acetonitrile			
	Appearance: No Obvious Change			
White CSM Glove (Palm)	Thickness: 0.75 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Acetic Acid 99%			
	Appearance: No Obvious Change			
White CSM Glove (Palm)	Thickness: 0.77 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Ammonium Hydroxide 25%			
	Appearance: No Obvious Change			
White CSM Glove (Palm)	Thickness: 0.75 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Hydrogen Peroxide 30%			
	Appearance: No Obvious Change			
White CSM Glove (Palm)	Thickness: 0.77 mm	6	> 480 Mins	6
	Permeation Breakthrough Time: > 480 Mins			
	Chemical: Formaldehyde 37%			
	Appearance: No Obvious Change			

12 pH Value

AS Per BS EN ISO 21420:2020, 4.2, With Reference To BS EN ISO 3071:2020 For Textile, Potassium Chloride (KCl) Solution Extracted, pH Value Was Measured By pH Meter.

Tested Component	Result	Requirement
White CSM Glove	5.9	*

Temperature Of The Extracting Solution: 24.0°C

pH Of The Extracting Solution: 5.52

Remark: * = The pH Value Shall Be Greater Than 3.5 And Less Than 9.5

Conclusion:

Standard

BS EN ISO 21420:2020 For pH Value

Result

Pass

13 Polycyclic Aromatic Hydrocarbons (PAH) Content:

As Per ISO 16190:2021, By Solvent Extraction And Determined By Gas Chromatography - Mass Spectrometry (GC/MS)

No.	Tested Compound	CAS No.	Results (mg/kg)	Requirement (mg/kg)
1.	Benzo[a]pyrene (BaP)	50-32-8	ND	1.0
2.	Benzo[e]pyrene (BeP)	192-97-2	ND	1.0
3.	Benzo[a]anthracene (BaA)	56-55-3	ND	1.0
4.	Chrysene (CHR)	218-01-9	ND	1.0
5.	Benzo[b]fluoranthene (BbFA)	205-99-2	ND	1.0
6.	Benzo[j]fluoranthene (BjFA)	205-82-3	ND	1.0
7.	Benzo[k]fluoranthene (BkFA)	207-08-9	ND	1.0
8.	Dibenzo[a,h]anthracene (DBAaH)	53-70-3	ND	1.0

Remark: ND = Not Detected

Detection Limit = 0.5 mg/kg

Tested Component: White CSM Glove

Conclusion:

Standard

BS EN ISO 21420:2020 Protective Gloves - General Requirements And Test Methods - Polycyclic Aromatic Hydrocarbons (PAH) Content

Result

Pass

- 14 Abrasion Resistance After Aging (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.1, 9 kPa, Aging Condition: 120°C, 72 h)

Adhesion Contact Time Of Test Specimen With The Double-Sided Adhesive Tape Under A Weight Of A Approximatley 10 kg	5 Min
Surface Treatment Of Test Specimen In Order To Improve Adhesion	No Surface Treatment
Abradant	The Klingspor PL 31 B-Grit 180 Grain Aluminium Oxide
Double-Sided Adhesive Tape	3M™ Double-Sided Adhesive Tape

Observation	Specimen 1	Specimen 2	Specimen 3	Specimen 4
After 100 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 500 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 2000 Cycles:	No Breakthrough	No Breakthrough	No Breakthrough	No Breakthrough
After 8000 Cycles:	Breakthrough (#1)	Breakthrough (#2)	Breakthrough (#3)	No Breakthrough

Performance Level: 3

Remark:

The Minimum Requirements For Each Level:

Level 1: 100 Cycles

Level 2: 500 Cycles

Level 3: 2000 Cycles

Level 4: 8000 Cycles

#1= Breakthrough Occurred Before 3800 Cycles

#2= Breakthrough Occurred Before 4500 Cycles

#3= Breakthrough Occurred Before 6700 Cycles

This Test In The Report Is Not Included In The CNAS Accreditation Schedule For Our Laboratory.

- 15 Tear Resistance After Aging (BS EN 388:2016+A1:2018 / EN 388:2016+A1:2018, 6.4, Aging Condition: 120°C, 72 h)

Test Area:

Glove Palm

Specimen 1:	11 N
Specimen 2:	13 N
Specimen 3:	13 N
Specimen 4:	18 N
Performance Level (*):	1

Remark:

The Minimum Requirements For Each Level:

Level 1: 10 N

Level 2: 25 N

Level 3: 50 N

Level 4: 75 N

* = The Performance Level Is Defined By Taking The Lowest Of The Four Values.

This Test In The Report Is Not Included In The CNAS Accreditation Schedule For Our Laboratory.

- 16 Physical Dimensions Test (BS EN ISO 21420:2020 / ISO 21420:2020, 6.1, Modified)

Size	Specimen	Cuff Internal Circumference	Wrist Internal Circumference	Index Finger Internal Circumference	Applicant's Requirement	Pass/Fail
8	1	642 mm	244 mm	85 mm	-	-
	2	645 mm	243 mm	84 mm	-	-
	3	644 mm	242 mm	85 mm	-	-

Size	Specimen	Glove Overall Internal Length	Middle Finger Internal Length	Glove External Width	Applicant's Requirement	Pass/Fail
8	1	796 mm	72 mm	163 mm	-	-
	2	792 mm	72 mm	161 mm	-	-
	3	801 mm	72 mm	160 mm	-	-

Remark: This Test In The Report Is Not Included In The CNAS Accreditation Schedule For Our Laboratory.



End Of Report

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Remark:

1. As Requested by the Applicant, For Details Refer to Attached Page (s).
2. All the tested item are tested under the standard condition.
3. The report is valid with commission test only for the test samples in the case of delivering samples by clients.