

GR + MM + PZ

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For the attention of: Vivian Zheng

TEST REPORT

N. **4034316/E**

date: 24/11/2021

Sampling: done by the Applicant


Samples received on: 03/11/2021

Test period: 05-09/11/2021

SAMPLES: Airbag vest for the protection of hip and head of elderly art. **S-AIRBAG S20** size S, M, L, XL and XXL.

See the complete description on the next page.

REQUEST: Laboratory tests for partial repetition of the negative results of the test reports no. 4030105/E in accordance with internal method me-int114 dedicated to airbags for elderly (similar/analogous method EN 1621-4:2013).

OUTCOME:  **PASS**

Notes:

All results refer exclusively to the tested materials.

Partial reproduction or publication, e.g. for advertising purpose not admitted without written authorization by RCT.

Positive results of a test report do not imply that the tested product is "certified" or "approved" by RCT.

Comments and interpretations are of subjective nature and not part of the Test Report.

Test carried out by qualified partner lab.

Conformity assessment criterion: the result is considered compliant until the value falls within or coincides with the specification limit.

Description:

Previous Airbag



Two non-refillable Helium inflators
(70 KPa code MSC30-4 and 85 kPa code MSC30-3)

New Airbag



Two non-refillable Helium inflators
(2 X 85KPa code MSC30-3)

References	Tests	Measuring unit	Requirements	Results
EN 1621-4:2013	Motorcyclists' inflatable protectors			
4.2.1 (EN ISO 13688:2013 4.2)	Innocuousness		Made of materials that have shown to be chemically suitable. Materials shall not in the foreseeable conditions of normal use release or degrade to release substances generally known to be toxic, information claiming that the product in innocuous shall be checked.	/
4.2.1 (EN 340:2003 §5.3)	Dimensional changing due to cleaning		(... washing cycles at...°C)	n/a
4.2.1 (EN 340:2003 §6 EN 13402-3:2004)	Sizing Declared size Declared dimensions - height - chest girth - waist girth Measured dimensions - height - chest girth - waist girth	 cm cm cm cm cm cm	 - - - - - -	 S 155-170 114 116 M 165-175 122 124 155-170 110-115 110-115
4.2.1 (EN 340:2003 §6 EN 13402-3:2004)	Sizing Declared size Declared dimensions - height - chest girth - waist girth Measured dimensions - height - chest girth - waist girth	 cm cm cm cm cm cm	 - - - - - -	 L 170-180 132 134 XL 175-185 142 144 170-180 115-120 130-135

References	Tests	Measuring unit	Requirements	Results
4.2.1 (EN 340:2003 §6 EN 13402-3:2004)	Sizing Declared size Declared dimensions - height - chest girth - waist girth Measured dimensions - height - chest girth - waist girth	 cm cm cm cm cm cm	 - - - - - -	 XXL 180-195 152 154 180-195 130-145 140-155
4.3	Zones of protection -covered zones:			Hip (H), Head
4.4 6.4	Intervention time = activation time (6.4.2) + inflation time (6.4.3)	ms	≤ 200	150
6.4.2	Activation time (ta) - speed: 13,33 m/s - initial delay: 30 ms	ms		n/a
6.4.3	Inflation time determined by the use of a high speed camera (1000 fps) with visual inspection using an appropriate software for frame analysis	ms	-	150
me-int 114	Duration time of inflated status maximum duration time declared by the manufacturer	s	≥ 1	1

References	Tests	Measuring unit	Requirements	Results
4.6	<p>Retention of the inflatable protector The inflatable protector shall be equipped with suitable and adjustable retention devices.</p> <p>If the inflatable protector is fitted in a garment, the retention devices may be incorporated into it.</p> <p>The functions shall be assessed by ergonomic testing in accordance with 6.7.</p> <p>In this case if the garment can be opened (zip, buttons, press stud, etc.), the user information shall contain a warning that the safety functions will work only with the garment being closed.</p>			<p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass (page 6 user guide)</p>
me-int 114 analogue method 4.7 (6.6)	<p>Impact attenuation (after 5 s) Protective zone: Impactor: flat, circular \varnothing 100mm anvil: hemispherical, r:100mm Impact energy: <u>50 J</u></p> <p>- Single strikes: 1) 2) 3)</p> <p>- Overall Mean value</p>	kN	<p>≤ 6</p> <p>$\leq 4,5$</p>	<p>Head</p> <p>2,0 - -</p> <p>-</p>
me-int 114 analogue method 4.7 (6.6)	<p>Impact attenuation (after 5 s) Protective zone: Impactor: flat, circular \varnothing 100mm anvil: hemispherical, r:100mm Impact energy: <u>26 J</u></p> <p>- Single strikes: 1) 2) 3)</p> <p>- Overall Mean value</p>	kN	<p>≤ 6</p> <p>$\leq 4,5$</p>	<p>Head</p> <p>1,5 1,8 -</p> <p>1,8</p>

References	Tests	Measuring unit	Requirements	Results
me-int 114 analogue method 4.7 (6.6)	Impact attenuation (after 5 s) Protective zone: Impactor: flat, circular \varnothing 100mm anvil: hemispherical, r:50mm Impact energy: <u>26 J</u> - Single strikes: 1) 2) 3) - Overall Mean value	kN	 ≤ 6 $\leq 4,5$	Hip 0,8 0,8 0,7 0,8
me-int 114	Activation angle declared: 45 to 65 Verified:	degree degree	- -	S M L 47/48 55/56 54/55
me-int 114	Activation angle declared: 45 to 65 Verified:	degree degree	- -	XL XXL 50/51 57/58
4.9 (6.7)	Ergonomic tests (done with the protector in non-inflated status and then repeated with the protector in the inflated status) a) Do you confirm the protector fits you properly (not for inflated status)? b) Can you turn your head and torso both sides? c) Is the adjustment system free from causing intolerable discomfort, considering also breathing? d) Do you feel the retention system holds the protector securely in place? e) Can you pick up something from the floor by bending forward?		 Yes Yes Yes Yes Yes	 Pass Pass Pass Pass Pass

- End of the test report -