



TEST REPORT

Report No.: SHE19030073-02ER

Date: 2019-12-16

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Applicant : ANHUI SUNFOAM HVAC PARTS CO., LTD.

Address : HUAGANG INDUSTRIAL ZONE, FEIXI COUNTY, HEFEI, ANHUI.

Sample Information

Sample Name : LDPE FOAM INSULATION TUBE WITH IXPE EMBOSSED SKIN.

Sample Type/Specification : /

Sample Qty. : 8 sets

Manufacturer : ANHUI SUNFOAM HVAC PARTS CO., LTD.

Manufacturer Address : HUAGANG INDUSTRIAL ZONE, FEIXI COUNTY, HEFEI, ANHUI.

Above information and sample(s) was/were submitted and certified by/on behalf of the applicant. ICAS was not responsible for the authenticity of the sample, and quoted the information with no responsibility as to the accuracy, adequacy and/or completeness.

Sample No. : E19030073-02

Date of Sample Received : 2019-03-29

Sample Test Period : 2019-04-12~2019-04-18

Test content:

Test item(s) : Please refer to next page(s).

Test Method(s) : Please refer to next page(s).

Prepared by:

(Nancy Xue)

Reviewed by:

(Jinjie Zhang)

Approved by:

(Authorized signatory: Jason Wu)





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Test equipment:

Equipment Name	Equipment number	validity of calibration
Density balance	E-013-02ITD	2019.12.11
Temperature and humidity chamber	E-022-03ITD	2019.09.03
High temperature oven	E-001-01ITD	2019.12.11
Universal material testing machine	E-023-01ITD	2019.12.11
Xenon lamp aging test machine	E-034-01ITD	2019.04.25

Test Results:

Test items	Test Method	Test conditions	Unit	Test Results	
Apparent density	reference GB/T 6343-2009	Five samples were taken from the sample for testing, and the dimensions of the samples were measured in mm, and each position was measured at three positions, the average value of each position was calculated, and the sample volume was calculated. Weigh the sample in g. Apparent density: $\rho = \frac{m}{V} \times 10^4$	kg/m ³	34.2	
Compression set	reference GB/T 6669-2008	1. Measuring sample height d_0 2. Place the sample in the compression set and adjust the instrument to compress the sample to 50% of the original height. 3. Place the compression set in a 60 °C environment for 24 h. 4. After releasing the compression setter for 30 min \pm 3 min, measure the height d_1 of the sample. 5. calculate the compression permanent deformation according to the formula, $cs = \frac{d_0 - d_1}{d_0} \times 100\%$	%	49.13	
Dimensional stability	reference GB/T 8811-2008	Three samples were taken from the sample for testing. The outer diameter, wall thickness, height and size of the sample were marked before the test. The sample was placed at 80 °C for 24 h, and the mark was measured again after the test. Calculate the rate of change.	%	Outer diameter	-3.11
			%	Wall thickness	-3.21
			%	height	-0.75
Tear strength	reference GB/T 10808-2006	23°C, 50%RH, 72h; Pants sample; 50mm/min	N/m	673.33	



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Test items	Test Method	Test conditions	Unit	Test Results
Tensile Strength	reference GB/T 6344-2008	23℃, 50%RH, 72h; Dumbbell type; 500mm/min Note: The shape of the sample is irregular.	MPa	0.37
Elongation at break			%	193.01
Water absorption rate	reference GB/T 1034-2008	<p>1. The sample is placed in a 50 °C oven for 24 h, then cooled to room temperature in a dry box, and each sample is weighed to repeat the step until the mass change of the sample is within ±0.1 mg;</p> <p>2. Place the sample in a container containing distilled water and place it in a room temperature environment;</p> <p>3. After soaking for 24 hours, take out the sample and quickly wipe off all the water on the surface of the sample with a clean gauze, and weigh each sample again within 1 min.</p> <p>4. Calculation of water absorption mass fraction</p> $c = \frac{m_2 - m_1}{m} \times 100\%$	%	7.14
Heat aging	reference GB/T 3512-2014	85℃, 168h	/	There were no significant changes in the appearance of all samples after the test.
Xenon lamp aging	GB/T 16422.2-2014	<p>Continuous illumination</p> <p>Irradiance (W/m²): 0.51</p> <p>Band (nm): 340</p> <p>BST (°C): 65</p> <p>Box temperature (°C): 38</p> <p>Box humidity (%RH): 50</p> <p>Spray cycle: every 18min, spray 102min</p> <p>End of test: Total test time: 168h</p>	/	Level 5



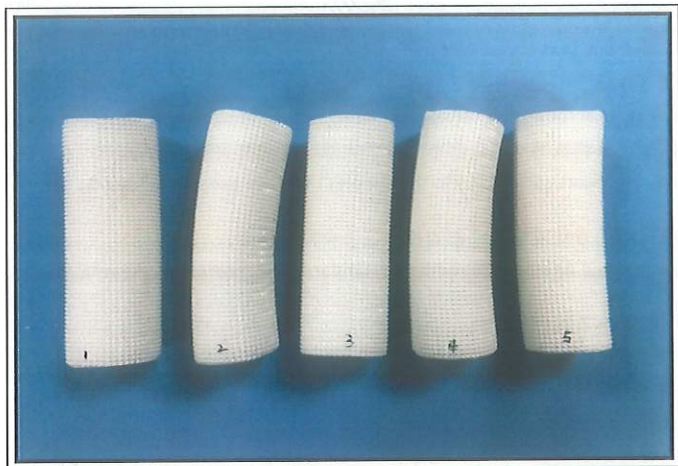
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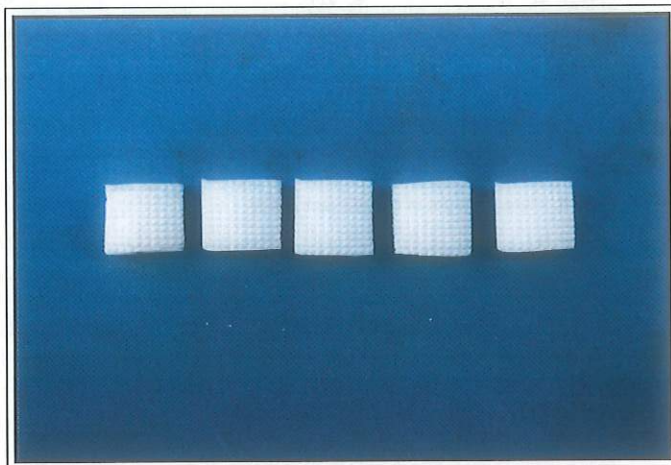
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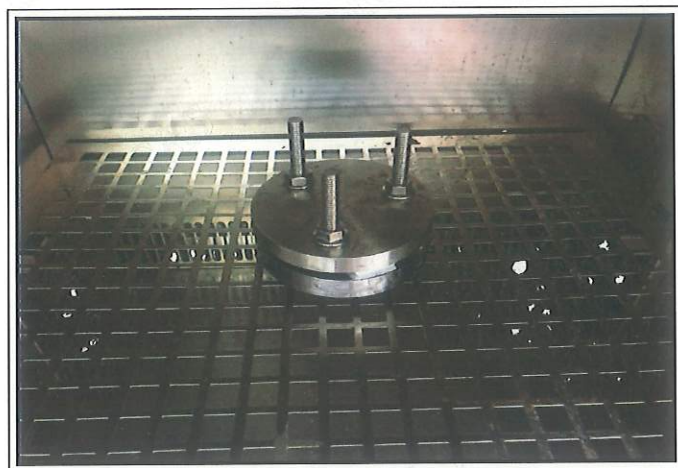
Sample Photos



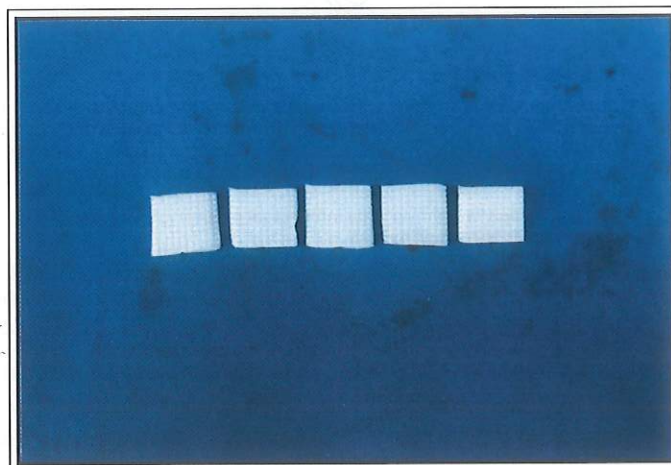
Apparent density



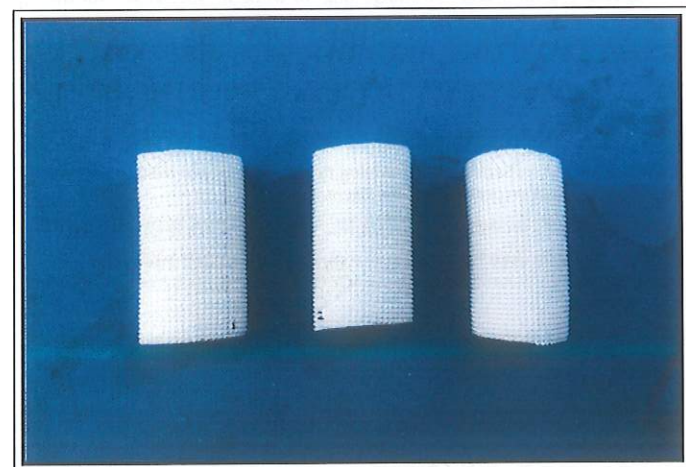
Before compression set test



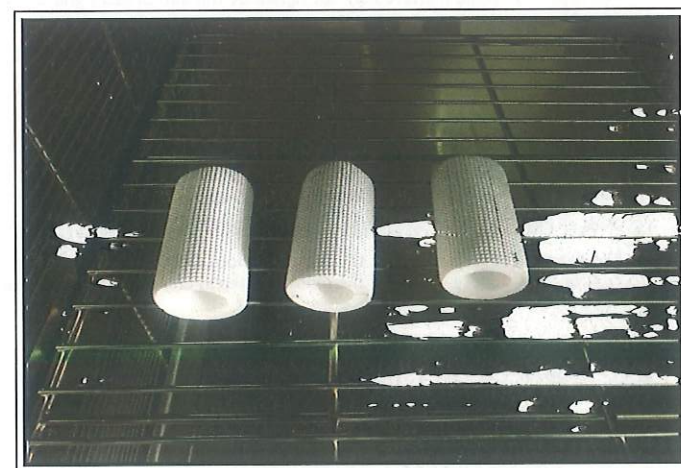
During compression set test



After compression set test



Before dimensional stability test



During dimensional stability test

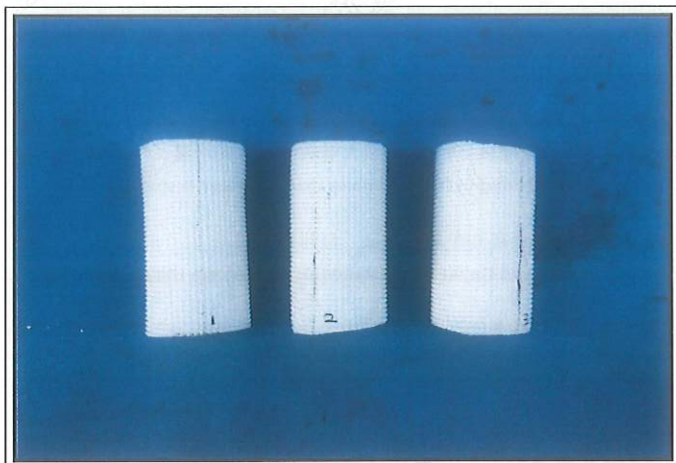


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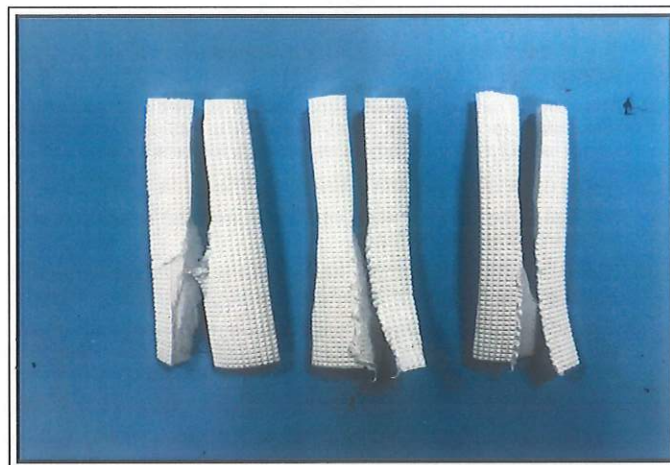
After dimensional stability test



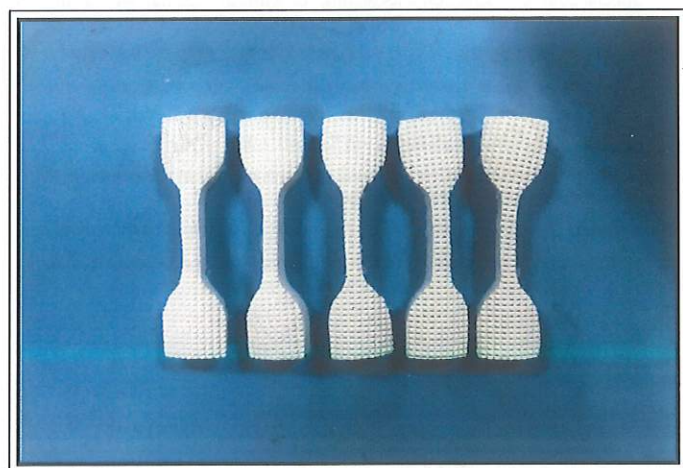
Before tear strength test



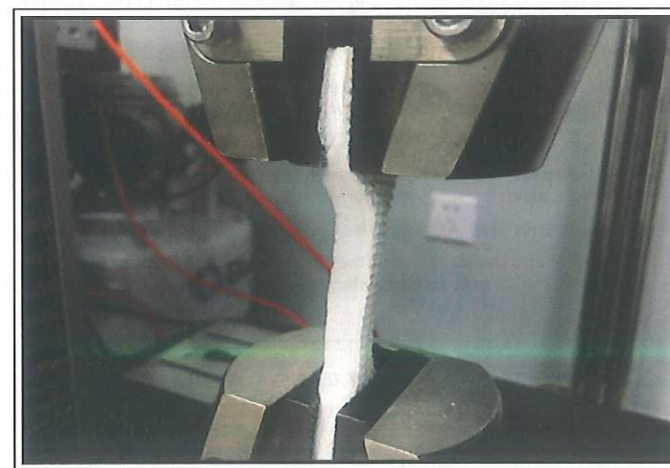
During tear strength test



After tear strength test



Before tensile test



During tensile test

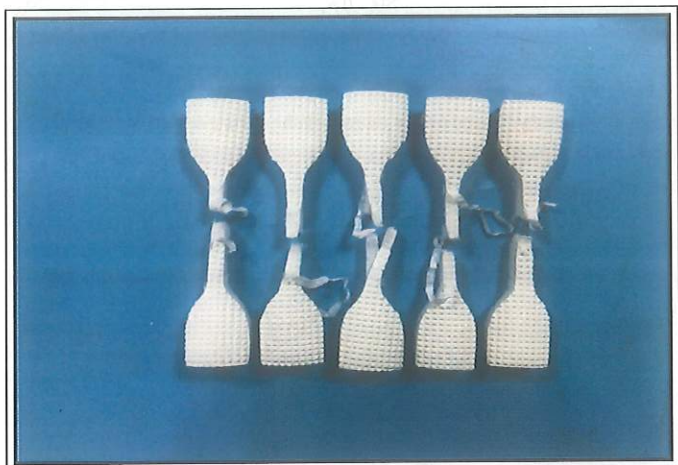


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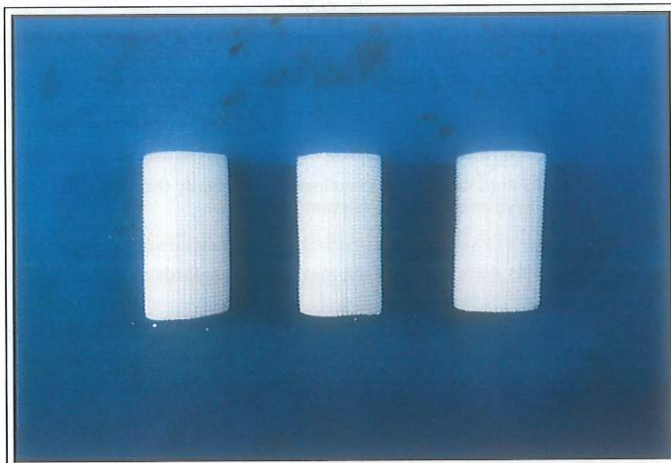
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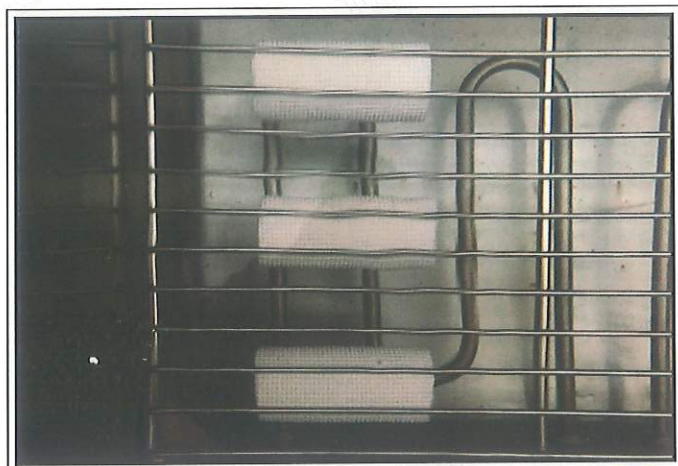
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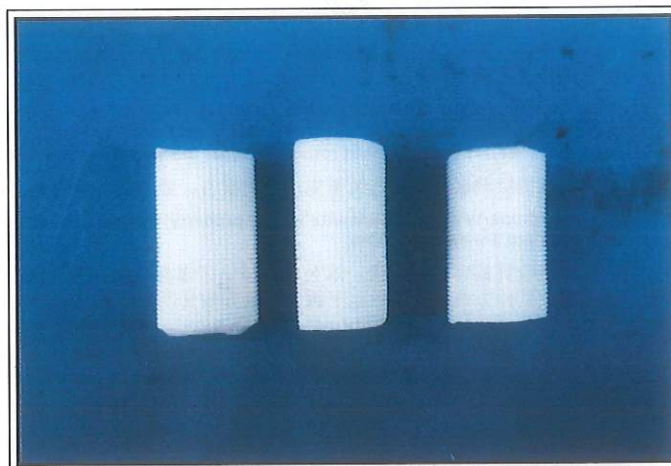
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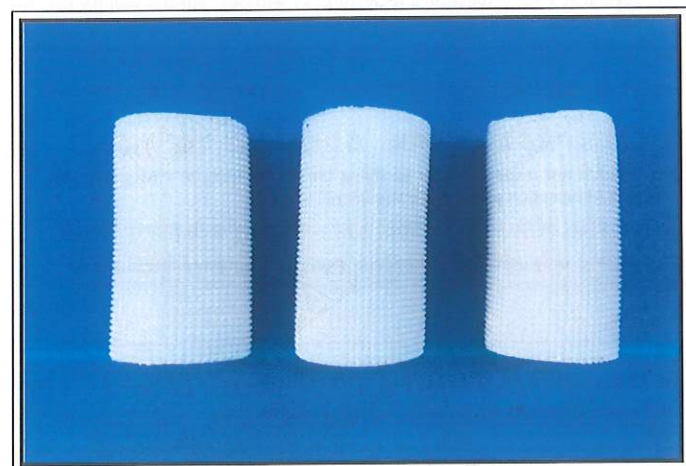
Before water absorption rate test



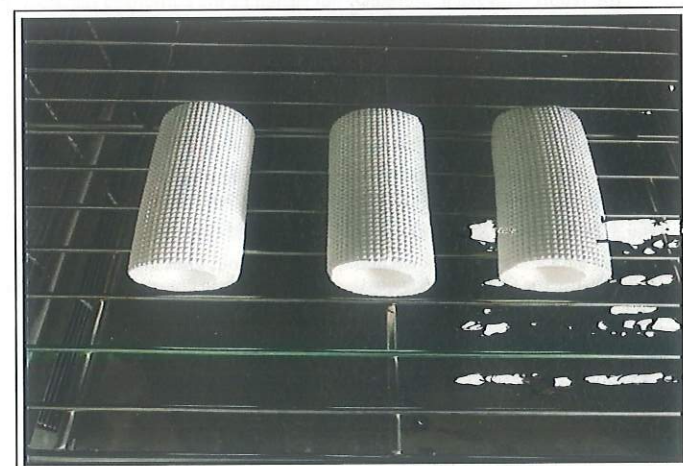
During water absorption rate test



After water absorption rate test



Before heat aging test



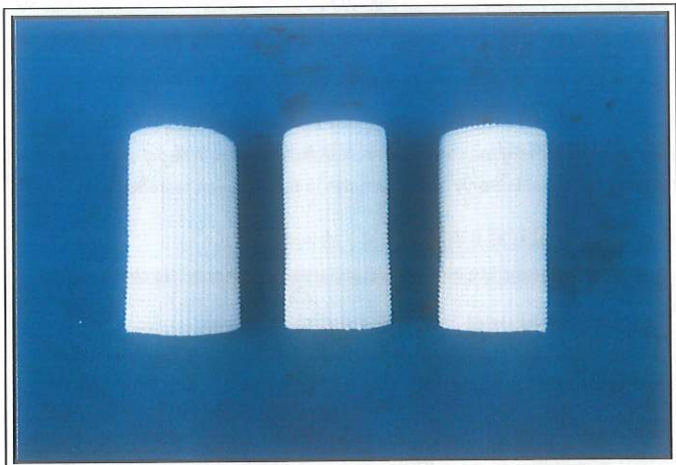
During heat aging test

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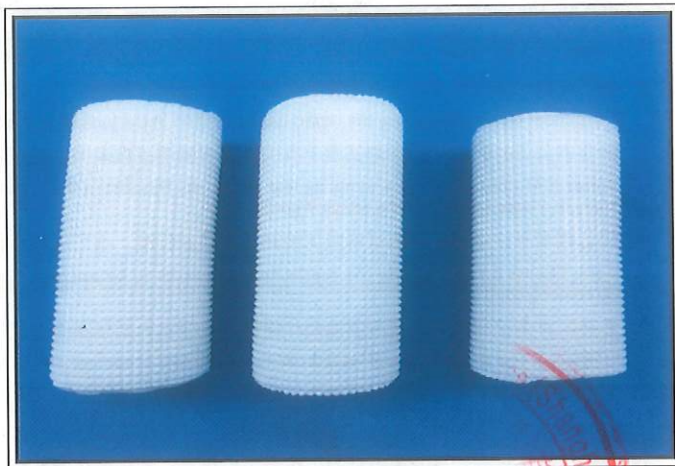
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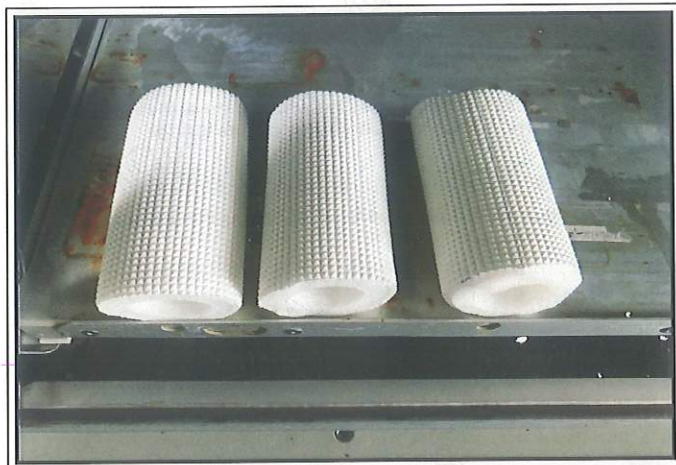
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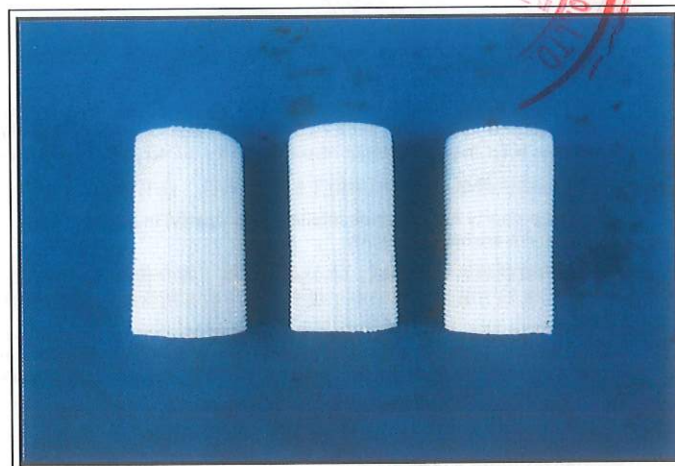
After heat aging test



Before xenon lamp aging test



During xenon lamp aging test



After xenon lamp aging test

This photo is limited to ICAS used this report

Report additional information:

This report supersedes our previous report No.SHE19030073-02 issued on 2019-04-18 which is hereby deemed null and void.

End of the report

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