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silicone leather furniture leather standard

1.1 Purpose:

Establish silicone rubber material standards, stabilize the quality output of raw materials, and ensure the uniqueness, standardization and Accuracy, in order to formulate the "Test Standard-Silicone Leather Standard".

1.2 Scope of application:

Applicable to all silicone leathers in use within the company.

1.3 Reference standards:

QB/T 5954-2023 Silicone artificial leather

GB/T 8949-2008 Polyurethane dry process artificial leather

GB/T 38465-2020 Test methods for artificial leather and synthetic leather - Determination of cold resistance

QB/T 4672-2014 Test methods for artificial leather and synthetic leather - Determination of yellowing resistance

QB/T 2537-2001 Leather color fastness test - Reciprocating rubbing color fastness

QB/T 2727-2017 Test for color fastness of leather to artificial light

QB/T 4689.20-1996 Leather coating adhesion fastness test

QB/T 2714-2005 Physical and mechanical tests on leather - Determination of folding fastness

GB/T 39507-2000 Martindale abrasion resistance test for leather

QB/T 5253.1-2018 Leather stain resistance test

QB/T 4712-2014 Leather tensile load test

QB/T 4198-2011 Leather tearing force test: single-sided tearing

GB/T 6682-1992 Specifications and test methods for water used in analytical laboratories

QB/T 3812.2-1999 Air conditioning for test pieces used for testing the physical properties of leather

QB/T 2464.23-1999 Determination of color fastness to perspiration of leather

2. Inspection standards:

Inspection Items	Inspection Standards	Inspection methods	Inspection Equipment	National/Light Industry Standards
The wide width is measured and recorded by a tape measure and compared with the acceptance standard.			tape measure	
Thickness standard agreed by both parties in writing		Use a thickness gauge to measure along the width of the leather at three points on the left, middle and right. Results are compared to the acceptance criteria as mean values	Dial gauge thickness instrument	

Appearance	1. The pattern is clear, with different depths. Consistent color 2. No black spots or leather surface Delamination (air bubble shell does not fit well) Good) Pinhole marks and wrinkles Defects such as oil stains 3. Softness and elasticity Consistent with the signed sample	Under sufficient light, the operator observes visually and finds Defects and color difference	Visual/tactile	
Color fastness to dry rubbing (times)	Dry rub resistance: ÿ4 level 500 times Wet rub resistance: ÿ4 level 500 times Sweat resistance: ÿ Level 4, 500 times	1. Cut four strips of at least 140mm*50mm, perpendicular to each other. Specimens, for dry friction and wet friction tests 2. Abrasion color fastness test device, the friction head consists of a diameter It is composed of a cylinder with a diameter of (16±0.1) mm and a downward pressure is applied. The force is (9±0.2)N, and can be applied to the specimen along the specimen direction (100 ±5) mm linear reciprocating motion 3. White cotton cloth (cotton friction cloth), in accordance with GB/T33729 Regulations, cut into blocks of approximately 50mm*50mm, and the same as those specified in 2 Friction head adaptability 4. Wet rubbing: Weigh the conditioned cotton rubbing cloth (2), then Immerse it completely in water, take it out after a while, and squeeze it out gently. Water, re-weigh the water absorption rate of cotton friction cloth to (100 ±5%), fix it on the friction head (2) and test it according to the above regulations. After the friction is completed, remove the cotton friction cloth and dry it at room temperature. Dry 5. Grey scale for assessing staining shall comply with the provisions of GB/T251.	Friction color fastness tester	Dry rubbing resistance: ÿ level 4, 50 times Wet rubbing resistance: ÿ level 4, 20 times Sweat resistance: ÿ Level 4 20 times
Odor/Level	ÿ3 Noticeable odor, but not offensive	1. Put the leather into a clean, odorless glass jar and cover it with a lid. 2. Place the glass jar containing the leather in an oven at 65 (±3)°C Take it out in 1H, 3. Remove the lid and place the nose 15cm away from the mouth of the jar. Fan with your hands to guide the air. Inhale slowly from the test can to your nose.	Nose	ÿ3
Color Migration	ÿ Grade 4	Temperature 50±2ÿ, press with 5KG weight for 18 hours and take out to determine whether the constant temperature and humidity chamber is ÿ4 level		
Seam strength /N	Warp ÿ196 Weft ÿ196 ÿ2 (only for woven fabric leather)	According to 6.9 of QB/T4043-2010	Seam fatigue resistance Strength testing machine	Longitude ÿ 196 Latitude ÿ 196
Joint slippage/ mm		Executed in accordance with GB/T13772.2-2008	Constant rate elongation test Tester	ÿ3.0
Resistance to moisture and heat aging	Hydrolysis resistance test, compared with the original sample, appearance, color, shrinkage, flexibility, etc. ÿ 4 levels	1. Temperature 70ÿ, humidity 95%, 24 hours multiple, not exceeding After 2400 hours, it can be set as 240 hours. 2. Take it out and place it at 23ÿ and 95% humidity for 2 hours. Compare with the sample.	Constant temperature and humidity chamber ÿ Level 3	

Martindale wear resistance (times)	ÿ60000 times	1. When sampling, take samples from different positions of the material to be tested and keep a certain distance from the material. At least 10CM from the edge. 2. Cut the sample with a diameter of (44+1) mm or (38+1) mm. 3. Before testing the sample in standard state, place the sample at a temperature of 21 ± The test can be performed in an environment of 1ÿ and relative humidity of 65±2% for more than 4 hours. 4. Place the sample into the sample holder base and place a The foam gasket is placed on the grinding head and fixed with a ring. Fix and tighten the base of the specimen holder using a wrench. 5. Hold the handles on the tablet with both hands, remove the tablet and install the blanket and friction cloth. 6. Place the sample holder with the installed sample facing down on the friction plate. cloth, take the weight, make the weight rod pass through the round hole on the plate, Align the groove on the sample holder with the weight rod. 7. Turn on the power, set the test conditions on the control panel, and start test. 8. The machine will automatically stop when the test conditions are met or the sample breaks during the process If there is any damage, press Pause to stop the machine. 9. Record the test results of the sample.	Martindale Wear Machine	ÿ50000
Folding fastness (times)	ÿ500000: No cracks	1. Use a cutting knife to cut a 70mmx45mm test piece from the material to be tested. As the test sample, two pieces are parallel in the horizontal direction and two pieces are parallel in the vertical direction. Towards; 2. Use arrows to indicate the direction of the test piece; 3. Adjust the upper fixture to the level; 4. Fold the test piece in half along the length direction at the center line, paying attention to the surface inward; 5. Place the test piece into the upper fixture and clamp it; 6. Fold the test piece in the opposite direction so that the surface of the test piece faces outward; 7. Adjust the appropriate tension and clamp the test piece in the lower fixture; 8. Repeat procedures B to G to install other test pieces; 9. Set the bending machine to 50,000 times and start bending. 10000/25000/35000/40000 times check the test piece, then every Check every 2000 times and record the damage level and type. Type; 10. Make a final check at 50,000 times and record the results	Flexure testing machine	50000
cold resistance	No cracks	According to HG/T 2-162	Low temperature impact test Machine inspection	
Anti-adhesion	ÿ Grade 5	Test according to 5.11 of GB/T 8949-2008 Constant temperature oven ÿ Level 4		
Bursting strength	ÿ1MPa	Place the sample with the coating facing downward, clamp it with a ring clamp, and slowly apply pressure. Until the sample is broken, the test result is the average of 3 samples. Value	Meuren rupture Strength testing machine	

Tensile load ÿNÿ	Warp ÿ 250 Weft ÿ 200	1. More than 100mm away from the edge of the sample along the longitudinal/longitudinal and weft/transverse directions Cut 3 pieces from each sample, the sample size is (200 ± 2) mm long and (30 ± 1) mm, defects such as flaws, marks, stains, etc. should be avoided when cutting. 2. Set the clamp spacing to (100 ± 1) mm and the constant elongation rate (200±20)mm/min. 3. Sample clamping: Clamp the sample at both ends in the length direction. The clamp is used to ensure that the center line of the tension passes through the midpoint of the clamp. Draw marker lines at both ends of the tool spacing initial distance. 4. The specimen can be clamped under pre-tension or loosely clamped. When the specimen is clamped under pre-tension, the elongation produced shall not exceed 2%. If this cannot be guaranteed, loose clamping, i.e. tension-free clamping, is used. 5. Measurement: Turn on the tester and stretch the specimen until it breaks. Record the maximum Maximum force (unit: N), accurate to 0.1 N, the distance between the clamps at break Distance Lÿ (unit: mm), accurate to 0.1 mm.	Double column tensile test Machine inspection	Meridian ÿ 161.7 Latitude ÿ88.2
Elongation at break	Warp ÿ15% Weft ÿ20%	Use the tensile testing machine to operate three 200mm*30mm specimens respectively. The sample marking line spacing is 100mm, and the tensile speed is 200mm/min. 1. Sampling complies	Double column tensile test Machine inspection	
Tearing load N(L/W)	Longitude ÿ 20 Latitude ÿ 20	with QB/T 2706/QB/T 2707 regulations. 2. The tensile testing machine should meet the following requirements: The fixture is suitable for the object being measured and moves at a rate of (100±20)mm/min. Uniform motion; device for recording force-distance curve; fixture Minimum width: (50±2)mm. 3. Adjust the distance between the clamps of the tensile testing machine so that the upper and lower clamps are The distance between the tools is 50mm. 4. Clamp the notch of the specimen on the lower fixture of the tensile testing machine. The other side of the cutout of the sample is about 20 mm, and the other side of the cutout of the sample is folded 180° and clamped In the upper fixture, ensure that the long side of the specimen is parallel to the Direction of pulling force. 5. Start the tensile testing machine until the specimen breaks and record the force-distance picture.	Double column tensile test Machine inspection	ÿ20
Yellowing resistance	ÿ Level 3 (only white and light-colored products are assessed)	1. Cover the radial ends of the sample by 20 mm with a light shield. To the specimen tray are two concentric The leather side of the sample in the area between the circles faces the light source. 2. The temperature of the irradiation test chamber is set to (50±2)ÿ, and the sample The surface is parallel to the bottom of the bulb, and the vertical distance is (250±2)mm. 3. Start the switch, the sample tray rotates at 3r/min, and the sample is continuously exposed to light at a temperature of (50±2)ÿ. The time is an integral multiple of 6 hours. When the specified time is reached, remove the Take out the sample and remove the light shielding sheet	Yellowing resistance test machine	Grade ÿ3

Strip load ÿNÿ	ÿ25	1. Sampling standard: inner wall is square: 100mm*10mm 2. The tensile machine is operated vertically at a speed of (100±5) mm/min, and Automatically record force-distance diagrams 3. Dry sample test: Use a clean cloth dipped in detergent to wipe the surface of the adhesive board and the surface of the leather coating. 4. Apply a thin layer of adhesive evenly on the surface of the adhesive board. Keep the mixture at room temperature for 40 min and then place it in a (85±3)ÿ Heat in oven for 10 min. 5. Apply a layer of adhesive evenly on the surface of the sample, then place the sample with the coating layer facing down on the heated adhesive plate, with both ends Extend 15mm beyond the bonding board, and then press the weight block on the specimen 5minÿ 6. Insert the adhesive plate into the support frame, with the test end aligned with the support frame. Align one end, clamp the test end of the specimen with a specimen clamp, and hang it on the tension Hook it (see Figure 4). 7. Start the tensile machine to test and record the leather and coating layers Force-distance diagram for separation of 30−35mm. 8. Change the direction of the specimen on the support plate and follow 7.1.5. Repeat the test in the opposite direction.	Double column tensile test Machine inspection	ÿ2.5
TABER Wear-resistant	CS-10, 500g, 3000 rpm	1. Pre-grinding and cleaning. 2. Sandpaper sample installation. 3. Remove the compression nut and gasket, loosen the fixing ring screw with a wrench, and pick up the fixing ring. 4. Place the center hole of the sandpaper on the rubber pad of the screw. Put the sandpaper sample on the cover and fix it with the compression nut. Put the fixed ring on, tighten the fixed ring screw with a wrench, and put the pressure rod and Lower the vacuum rod. 6. Loosen the screws on the rear seat of the machine and move the vacuum The dust rod base rises or falls to adjust the dust suction port and the sandpaper sample. The nozzle is placed 0.8mm to 1.6mm above the surface and cannot be sucked up. 7. According to the test number and rotation speed specified in the experiment, During the test, check and record the damage degree of the sample according to the specified number of times. Degrees.	TABER wear test Machine inspection	500 rpm