

ENGINEERING DEPT	PRODUCT SPECIFICATION	SPEC No: GS-BF-EN-049
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1.0 SCOPE

This Specification covers Dust Helmet Series.

PRODUCT NAME	PART NUMBER
Dust Helmet	EAJX-XXXX

2.0 SCOPE OF APPLICATION

Pilot run this test is suitable for mobile phones and new samples and production material directly sampling stage, appearance of stainless steel pieces of reliability test.

3.0 TEST DESCRIPTION

Contents of this test, the appearance of the main pieces of stainless steel to verify the reliability of the performance test. According to stainless steel parts used in the process, the process of testing different contents vary, specific test plan can be adjusted with reference to the test content precautions.

4.0 TEST AND PERFORMANCE:

Unless otherwise specified, all tests and measurement shall be performed under the following conditions in accordance with EIA

Ambient Temperature: 15 °C-35 °C

Relative Humidity :60% to70% R.H.

Operating Temperature Range :-35 °C to +80°C

Storage Temperature Range: -10 °C to +60°C

APPROVED BY: _____ **CHECKED BY:** _____ **VERIFIED:** Ann

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5. ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITIN	REQUIREMENT
5.1	Low temperature storage Test	The products exposed to the condition of $-40\pm 3^{\circ}\text{C}$ with 90~95% Humidity for 24hour; Recovery time 2 hours.	No Corrosion, discoloration and other bad phenomenon
5.2	High temperature storage Test	The products exposed to the condition of $80\pm 2^{\circ}\text{C}$ with 90~95% Humidity for 24hour; Recovery time 2 hours.	No Corrosion, discoloration and other bad phenomenon
5.3	High temperature and humidity test	$T = + 60 \pm 2^{\circ} \text{C}$, RH = 93 + / - 3%, test time of 48 hours, temperature back 2 hours later check appearance .	No evidence of physical damage
5.4	Wet and heat cycle Test	Room temperature is not more than 1 C/MIN speed change and + 40 ° C, RH: 93 + / - 3%, keep 1 hour;To no more than 1 C/MIN speed change to - 10 ° C, keep 1 hour;Termination of cycle 13 times, cycle, temperature back 2 hours later check appearance.	No Corrosion, discoloration and other bad phenomenon
5.5	Temperature shock Test	In the sample of the low temperature storage temperature and 40 ° C and + 80 ° C high temperature storage temperature every 30 minutes, intermediate conversion time less than 30 seconds.Cycle 24 times.Cycle rebound after 2 hours after the expiry of the examination appearance .	No Corrosion, discoloration and other bad phenomenon

ITEM	DESCRIPTION	TEST CONDITIN	REQUIREMENT
5.6	Salt Spray Test	<p>Sodium chloride content of $5 \pm 1\%$ salt solution; temperature of 35°C, the liquid collected after spraying, PH value of $6.5 \sim 7.2$. Allowing a diluted hydrochloric acid or sodium hydroxide to adjust the chemically pure PH value. Experimental effective space temperature 35°C; continuous spray test time is 48H; continued after the expiration of the box to return to normal atmospheric conditions remain stable after 2H, check the appearance .</p> <p>Place the test sample: the sample was placed inside the salt spray test and is facing up, the surface can not be tested by the direct injection of salt spray. Samples should be stored flat in principle, be tested in the salt spray chamber surface and vertical direction $15^\circ \sim 30^\circ$ folder</p>	No deformation, corrosion, foaming, oxidation and other bad phenomenon
5.7	Artificial sweat Test	<p>The materials were placed in two PH value Khan, the trial lasted 24 hours, after the end of the trial took place under ambient conditions 2H, check the appearance of no corrosion, discoloration and other undesirable phenomena.</p> <p>Khan recipe (two kinds of PH value of the solution with a total capacity of 1 liter each):</p> <p>Acid PH = 4.7: L-histidine hydrochloride 0.45g, NaCl 5.0g, sodium dihydrogen phosphate dihydrate 2.2g, acid 1.0g; PH value of the solution was adjusted using sodium hydroxide</p> <p>Alkaline PH = 8.0: L-histidine hydrochloride 0.45g, NaCl 5.0g, disodium hydrogen phosphate dihydrate 5.0g, acid 1.0g, PH value of the solution was adjusted using sodium hydroxide</p>	No corrosion, discoloration, etc. Bad phenomenon
5.8	Technology of wear-resistant Test	<p>Abrasion tester, load 175g force, select the area to be measured flat parts, set the appropriate test laps, 50 laps to check the status of each process surface, until the final 50 laps, 10 laps each surface inspection process state. After the test is completed, the test area without bottomed timber requirements.</p> <p>Coating Process: 300 laps</p>	Regional invisible substrates tested; Original material process do not do this test

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		Baking: 200 laps Surface printing: 60 laps	
5.9	Process hardness Test	<p>Imposed by Mitsubishi Pencil (top polished) 750g of pressure, with the test surface was 45 °, draw five lines in a different position of the surface, wipe the surface to check for scratches, no scratches qualified.</p> <p>Paint / UV / vacuum plating: 2H</p> <p>Rubber paint: HB (may have scratches, but can not cut and roll)</p> <p>Water plating: 3H</p> <p>The implementation of new processes in accordance with industry standards</p>	Original material process do not do this test
6.0	Adhesion Test	<p>The surface of the sample A-80 100 sized inserts designated area of 1 mm² grid, when the area is not the case 100 can be reduced appropriately, but not less than 20 frames.</p> <p>3M810 # or by pasting the adhesive tape 3M600 #</p> <p>Crosshatch area after 3 minutes, pull angle of 90 °, was repeated three times.</p> <p>Level 0: Cutting edge completely smooth, without a grid off;</p> <p>Level 1: a little notch at the intersection of the coating off, but cross-cutting area of the affected area is less than 5%;</p> <p>Level 2: at the intersection of the incision and along the cut edge with a coating off the affected cross-cut area greater than 5% but not more than 15%</p> <p>Level 3: Cross-cut-off of the coating and has a cut edge along the affected cross-cut area is greater than 15% but not more than 35%</p> <p>Environmental testing required before the sample without making more than one level of adhesion</p> <p>Sample after environmental testing, salt spray testing, artificial sweat test</p> <p>After more than two levels of adhesion</p>	Original material process do not do this test

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6.1	Alcohol-resistance Test	Moistened with alcohol to clean the cotton surface and the surface of the printing pressure spray wipe back and forth, the measured surface can not discolored and peeling paint, printing can not fall off. 99.5% alcohol concentration, pressure standard 500gf, 1 second back and forth once, wipe times 200 times.	no change in the measured surface as qualified; measured surface have bottomed out as stripping or NG (Only for printing)
6.2	Boiled Test	<p>After the water bath reaches the set temperature, the sample is placed into the water bath test.</p> <p>Coating process: the water temperature is 99.8 ° C, the water should not boil, test time 15 minutes;</p> <p>Paint process: the water temperature is 80 °C, test time 30 minutes</p> <p>After the test, does not allow paint, coating technology bubble, wrinkles, loss, burst paint, pinholes and other undesirable;</p> <p>Pitting, pale, slight discoloration problem: According to the boiled sample adhesion test results as the final judgment (the adhesion level ISO2 (ASTM:. 3B) are considered qualified)</p>	<p>After adhesion test samples need to be assisted determination, in accordance with the coating process 1 * 1mm² grid coating process 2 * 2mm² grid approach for testing.</p>