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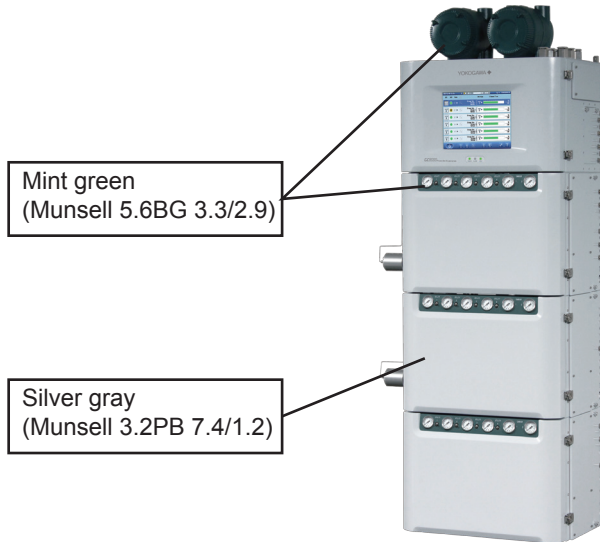
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1. Purpose

This document describes the production procedure for the execution of the standard coating for GC8000.

2. Target model

Process Gas Chromatograph (GC8000)



3. Coating specifications

3.1 Coating area

Applicable coating area is main enclosure, doors and protection system housing.

3.2 Specifications

Polyurethane resin coating

		Reference standard		
		JIS (ISO)	ASTM	
Coating	Solvent spraying coating, Heating/Drying			
Color	Silver gray (Munsell 3.2PB 7.4/1.2) Mint green (Munsell 5.6BG 3.3/2.9)			
Material	Polyurethane resin			
Layer Thickness	Under coating: 15 to 25 μm (Note) Final coating: 30 to 60 μm			
Gloss	Specular glossiness: 85 to 95%			
Evaluation test	Heat Resistance	125 \pm 2 degC, 24 h	K5600-6-3 (ISO 1513) ---	
	Adhesion Test	In case of 0 to 60 μm (coating thickness) -> Peel Test for Grid: 1 mm width (Sampling QTY: 100)	K5600-5-6 (ISO 2409) D3359	
	Sun Test	Sunshine Weather Meter 500 h Result: Change in Gloss: 20% or smaller	K5600-7-7 (ISO 11341) ---	
	Chemical Resistance	5% H ₂ SO ₄ Solution immersion 200 h Result: No Blister	---	---
		5% NaOH Solution immersion 200 h Result: No Blister	---	---
Salt Spray Test	Spraying of 5% NaCl Solution (35 degC, 1000 h) Result: No Blister Comes Off at Cut Point: 2 mm or smaller	K5600-7-1 (ISO 7253)	B117	

Note: Under coating is performed for aluminum alloy casting.

4. Procedure

4.1 preprocessing (rinse and chemical conversion coating)

Before coating, alkaline degreasing, water rinse and chromate coating* are performed.

*: Chromate coating is performed only for aluminum alloy casting.

4.2 Coating

Polyurethane resin coating

(1) Aluminum alloy casting (control unit door, oven unit door and protection system housing)

Process No.	Process	Treatment / Paint material	Condition
1	Under coating	Epoxy resin type primer	Thickness: 15 to 25 μm
2	Final coating	Polyurethane resin paint	Thickness: 30 to 60 μm
3	Forced drying	---	Drying Temp. & Time: 120 \pm 10 $^{\circ}\text{C}$, 25 to 30 min

(2) Electrolytic zinc-coated steel sheet (main enclosure (except doors))

Process No.	Process	Treatment / Paint material	Condition
1	Final coating	Polyurethane resin paint	Thickness: 30 to 60 μm
2	Forced drying	---	Drying Temp. & Time: 120 \pm 10 $^{\circ}\text{C}$, 25 to 30 min

4.3 Inspection

No.	Inspection/test name	Test frequency	Test method	Details	Judgment
1	Visual inspection	All products	Visual test	Check for scratch, peeling, stain etc	Limit sample
2	Masking inspection	All products	Visual test	Confirm masking condition	No residual coating, no deposited coating
3	Coating thickness test	One test piece/day	Film thickness gauges	Measure thickness using film thickness gauge	Within tolerance which is defined in standard
4	Color difference test	Lot unit / time	Visual test	Color sample	No color difference
5	Glossiness test	Lot unit / time	Glossiness checker	Measure glossiness using glossiness checker	Within Standard value \pm 5%
6	Coating film bending test	One test piece/day	Coating film bending test JIS K 5600-5-1 (ISO 1519)	Bend test piece (diameter: 10 mm)	No crack, no peeling etc
7	Adhesion test	One test piece/day	Adhesion test JIS K 5600-5-6 (ISO 2409)	(Note)	All grid is not peeled
8	Hardness test	One test piece/day	Pencil hardness test JIS K 5600-5-4 (ISO 2409)	Pencil method	Hardness: more than level H After scratch with nail, There is no damage.

Note: 1. Make 100 pcs of grid (1x1 mm) using utility knife.
2. Stick adhesive tape on the grids by finger press.
3. Peel off the tape

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